



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 28, 2024 – 05:44 am BST

PDB ID : 2IUB
Title : Crystal structure of a divalent metal ion transporter CorA at 2.9 Å resolution.
Authors : Eshaghi, S.; Niegowski, D.; Kohl, A.; Martinez Molina, D.; Lesley, S.A.; Nordlund, P.
Deposited on : 2006-06-01
Resolution : 2.90 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.36.2
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) : 2.36.2

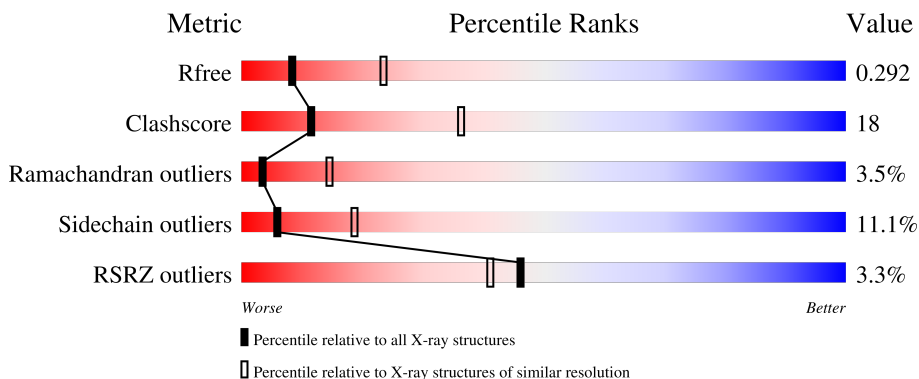
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 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	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)

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	363	
1	B	363	
1	C	363	
1	D	363	
1	E	363	

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Mol	Chain	Length	Quality of chain
1	F	363	<p>3% 55% 32% 6% • 6%</p>
1	G	363	<p>3% 58% 30% 5% • 6%</p>
1	H	363	<p>4% 57% 30% 5% • 7%</p>
1	I	363	<p>2% 56% 31% 6% • 6%</p>
1	J	363	<p>3% 56% 29% 6% • 7%</p>

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 27580 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 DIVALENT CATION TRANSPORT-RELATED PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	331	Total 2736	C 1780	N 447	O 501	S 8	0	0	0
1	B	331	Total 2728	C 1775	N 444	O 501	S 8	0	0	0
1	C	331	Total 2726	C 1773	N 444	O 501	S 8	0	0	0
1	D	331	Total 2730	C 1777	N 444	O 501	S 8	0	0	0
1	E	331	Total 2730	C 1777	N 444	O 501	S 8	0	0	0
1	F	342	Total 2793	C 1814	N 458	O 512	S 9	0	0	0
1	G	342	Total 2790	C 1812	N 458	O 512	S 8	0	0	0
1	H	338	Total 2767	C 1799	N 451	O 508	S 9	0	0	0
1	I	340	Total 2776	C 1804	N 453	O 510	S 9	0	0	0
1	J	336	Total 2763	C 1796	N 452	O 506	S 9	0	0	0

- Molecule 2 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total 1 Cl 1	0	0
2	B	1	Total 1 Cl 1	0	0
2	D	2	Total 2 Cl 2	0	0
2	F	1	Total 1 Cl 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	G	2	Total Cl 2 2	0	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	2	Total Mg 2 2	0	0
3	B	1	Total Mg 1 1	0	0
3	C	2	Total Mg 2 2	0	0
3	D	5	Total Mg 5 5	0	0
3	E	1	Total Mg 1 1	0	0
3	F	3	Total Mg 3 3	0	0
3	G	3	Total Mg 3 3	0	0
3	H	1	Total Mg 1 1	0	0
3	J	3	Total Mg 3 3	0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	2	Total O 2 2	0	0
4	B	3	Total O 3 3	0	0
4	C	1	Total O 1 1	0	0
4	E	1	Total O 1 1	0	0
4	F	1	Total O 1 1	0	0
4	G	1	Total O 1 1	0	0
4	H	2	Total O 2 2	0	0

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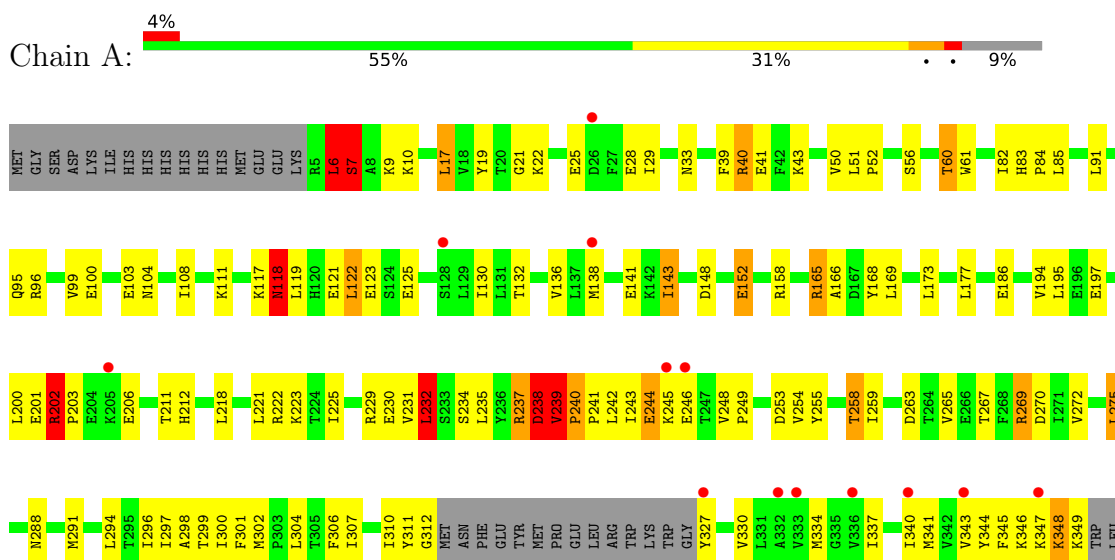
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	I	2	Total O 2 2	0	0

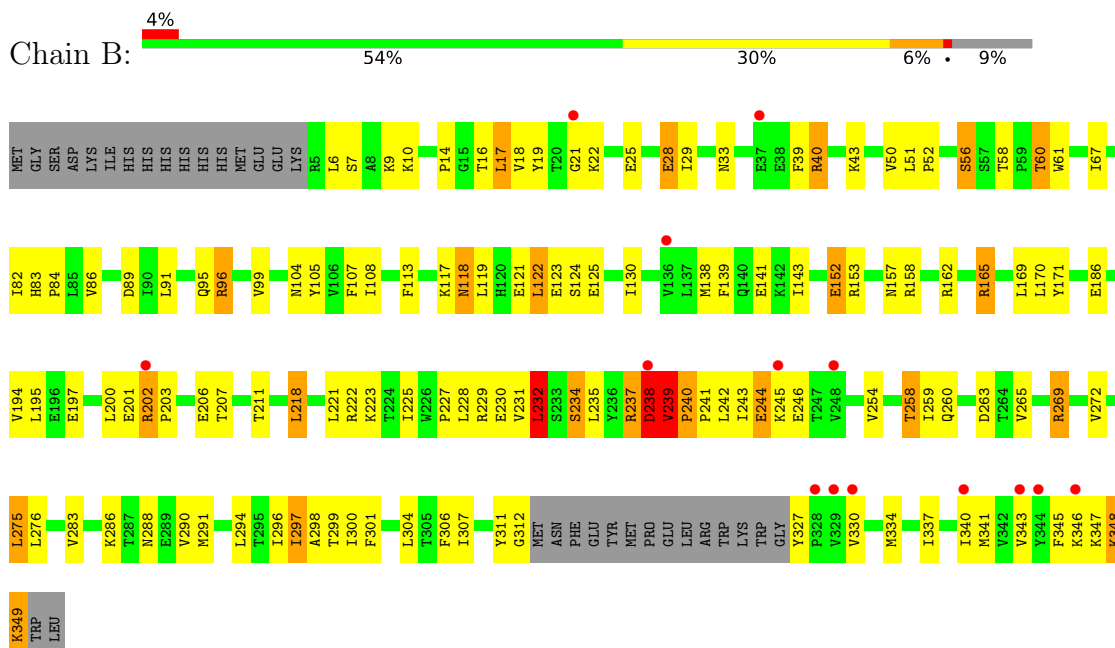
3 Residue-property plots

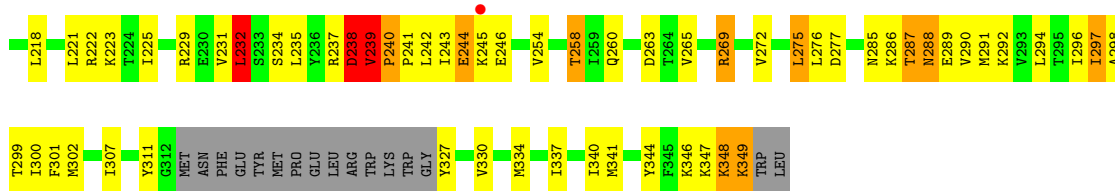
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

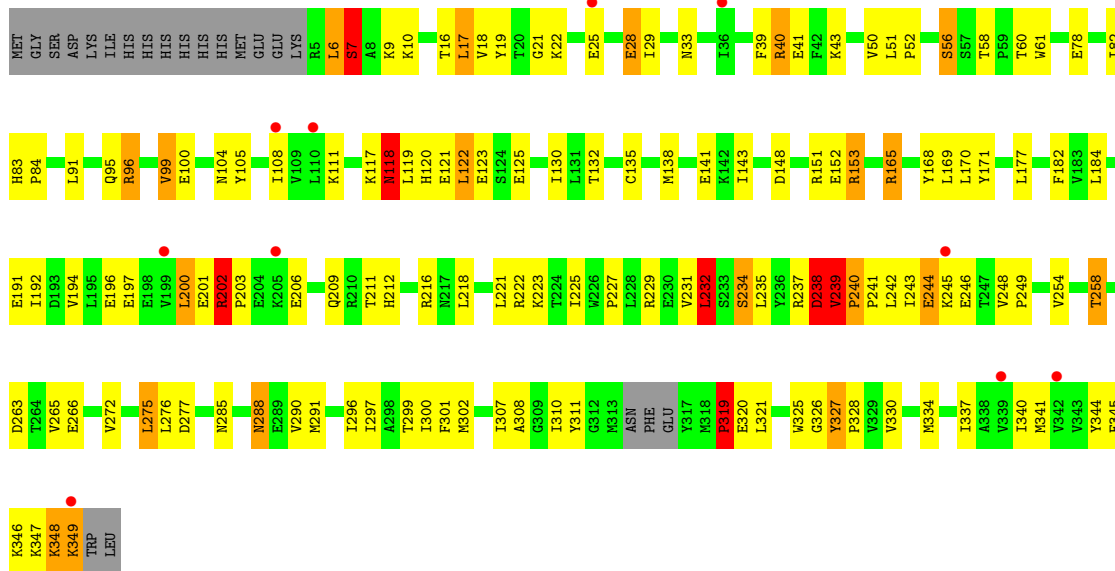


• Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN

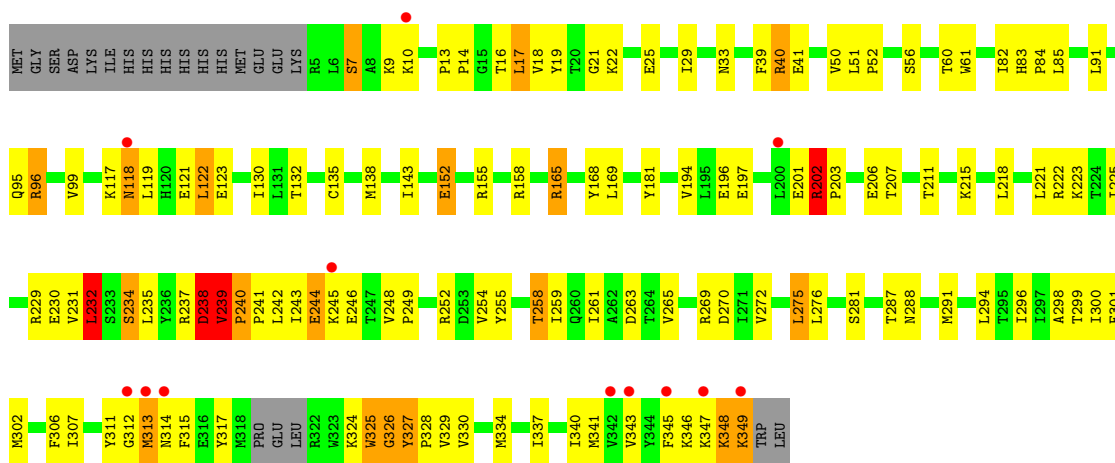




• Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN

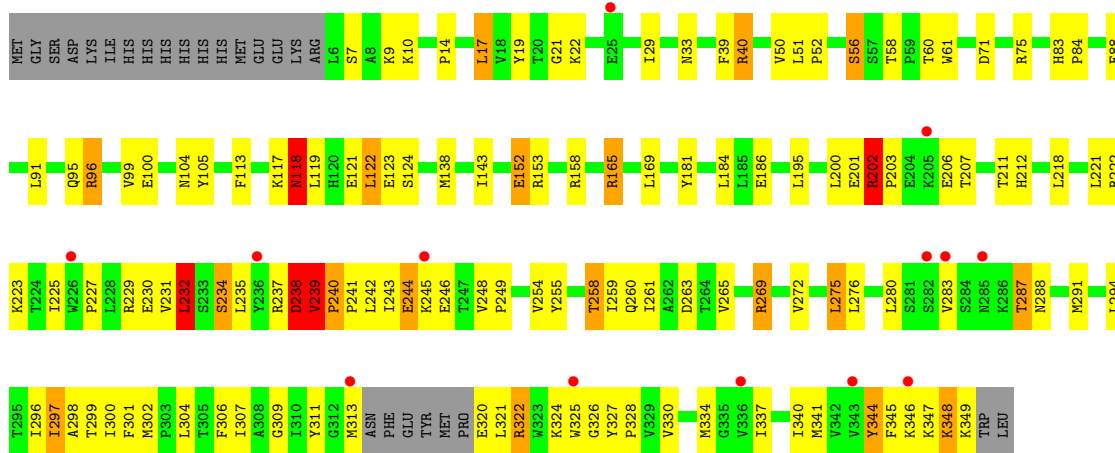


• Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN

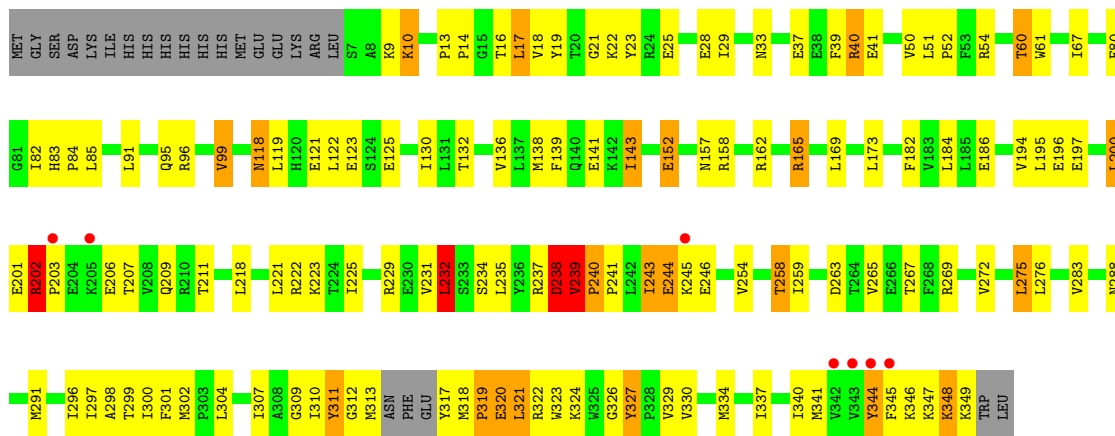


• Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN

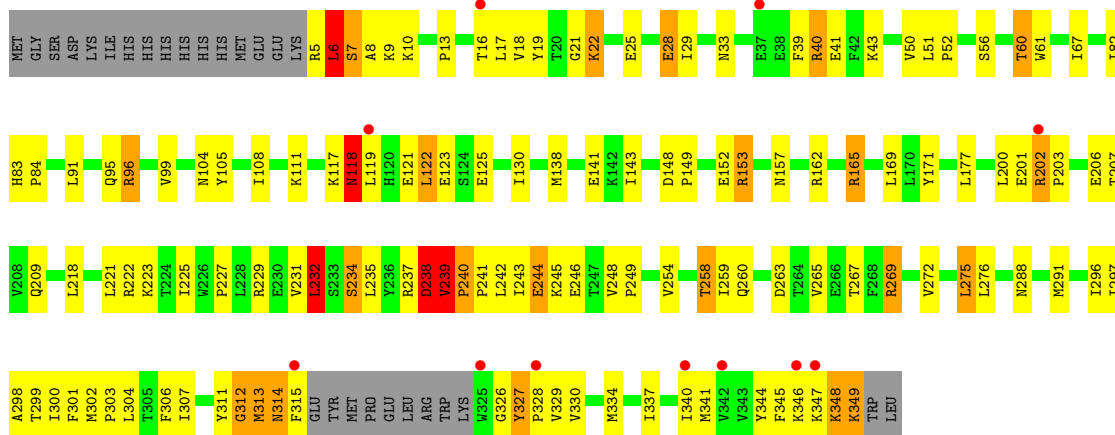




● Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN



● Molecule 1: DIVALENT CATION TRANSPORT-RELATED PROTEIN



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	116.23Å 151.46Å 143.32Å 90.00° 98.88° 90.00°	Depositor
Resolution (Å)	30.00 – 2.90 29.82 – 2.90	Depositor EDS
% Data completeness (in resolution range)	90.3 (30.00-2.90) 90.3 (29.82-2.90)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.69 (at 2.90Å)	Xtrriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.260 , 0.291 0.261 , 0.292	Depositor DCC
R_{free} test set	4921 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å ²)	70.7	Xtrriage
Anisotropy	0.019	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 48.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	27580	wwPDB-VP
Average B, all atoms (Å ²)	69.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.50% 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](#)

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

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	0.81	1/2792 (0.0%)	0.81	4/3783 (0.1%)
1	B	0.84	0/2784	0.81	4/3773 (0.1%)
1	C	0.85	1/2782 (0.0%)	0.81	5/3770 (0.1%)
1	D	0.84	1/2786 (0.0%)	0.82	4/3776 (0.1%)
1	E	0.84	1/2786 (0.0%)	0.90	6/3776 (0.2%)
1	F	0.84	4/2849 (0.1%)	0.85	5/3861 (0.1%)
1	G	0.85	1/2846 (0.0%)	0.84	6/3858 (0.2%)
1	H	0.88	2/2823 (0.1%)	0.84	4/3826 (0.1%)
1	I	0.84	0/2833	0.83	5/3841 (0.1%)
1	J	0.85	0/2819	0.95	9/3819 (0.2%)
All	All	0.84	11/28100 (0.0%)	0.85	52/38083 (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	C	0	1
1	E	0	1
1	F	0	3
1	G	0	1
1	I	0	3
All	All	0	9

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	G	135	CYS	CB-SG	-7.94	1.68	1.82
1	E	100	GLU	CG-CD	6.40	1.61	1.51
1	C	123	GLU	CG-CD	5.63	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	100	GLU	CG-CD	5.57	1.60	1.51
1	H	88	GLU	CG-CD	-5.53	1.43	1.51
1	A	100	GLU	CG-CD	5.51	1.60	1.51
1	F	135	CYS	CB-SG	-5.32	1.73	1.81
1	H	287	THR	N-CA	5.31	1.56	1.46
1	F	326	GLY	CA-C	5.30	1.60	1.51
1	D	135	CYS	CB-SG	-5.22	1.73	1.81
1	F	266	GLU	CG-CD	5.15	1.59	1.51

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	269	ARG	NE-CZ-NH2	-16.96	111.82	120.30
1	J	269	ARG	NE-CZ-NH1	16.64	128.62	120.30
1	J	269	ARG	NE-CZ-NH2	-16.34	112.13	120.30
1	E	269	ARG	NE-CZ-NH1	15.27	127.94	120.30
1	J	6	LEU	CA-CB-CG	8.43	134.70	115.30
1	J	269	ARG	CD-NE-CZ	7.88	134.63	123.60
1	E	269	ARG	CD-NE-CZ	7.24	133.74	123.60
1	I	269	ARG	NE-CZ-NH2	6.92	123.76	120.30
1	B	269	ARG	NE-CZ-NH1	-6.91	116.84	120.30
1	D	232	LEU	CA-CB-CG	-6.79	99.67	115.30
1	B	232	LEU	CA-CB-CG	-6.78	99.72	115.30
1	F	153	ARG	NE-CZ-NH2	-6.67	116.97	120.30
1	F	232	LEU	CA-CB-CG	-6.66	99.98	115.30
1	I	232	LEU	CA-CB-CG	-6.62	100.09	115.30
1	J	122	LEU	CA-CB-CG	6.55	130.36	115.30
1	G	232	LEU	CA-CB-CG	-6.53	100.27	115.30
1	D	122	LEU	CA-CB-CG	6.44	130.12	115.30
1	H	269	ARG	NE-CZ-NH1	-6.32	117.14	120.30
1	A	6	LEU	CA-CB-CG	6.32	129.83	115.30
1	F	319	PRO	N-CA-CB	6.30	110.86	103.30
1	A	269	ARG	NE-CZ-NH1	-6.29	117.15	120.30
1	B	269	ARG	NE-CZ-NH2	6.23	123.42	120.30
1	E	232	LEU	CA-CB-CG	-6.21	101.01	115.30
1	D	269	ARG	NE-CZ-NH2	6.07	123.34	120.30
1	B	122	LEU	CA-CB-CG	6.04	129.20	115.30
1	I	312	GLY	N-CA-C	-5.91	98.32	113.10
1	E	122	LEU	CA-CB-CG	5.89	128.84	115.30
1	G	122	LEU	CA-CB-CG	5.87	128.81	115.30
1	J	232	LEU	CA-CB-CG	-5.87	101.80	115.30
1	H	122	LEU	CA-CB-CG	5.67	128.33	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	269	ARG	NE-CZ-NH1	-5.66	117.47	120.30
1	F	99	VAL	CB-CA-C	-5.61	100.74	111.40
1	I	99	VAL	CB-CA-C	-5.61	100.75	111.40
1	I	269	ARG	NE-CZ-NH1	-5.59	117.50	120.30
1	C	232	LEU	CA-CB-CG	-5.57	102.48	115.30
1	J	153	ARG	NE-CZ-NH2	-5.54	117.53	120.30
1	H	232	LEU	CA-CB-CG	-5.50	102.64	115.30
1	A	232	LEU	CA-CB-CG	-5.49	102.67	115.30
1	C	122	LEU	CA-CB-CG	5.47	127.89	115.30
1	F	122	LEU	CA-CB-CG	5.43	127.79	115.30
1	A	122	LEU	CA-CB-CG	5.39	127.71	115.30
1	G	325	TRP	N-CA-C	-5.33	96.62	111.00
1	C	330	VAL	CG1-CB-CG2	5.31	119.40	110.90
1	H	325	TRP	C-N-CA	5.28	133.39	122.30
1	E	5	ARG	C-N-CA	5.24	134.80	121.70
1	C	269	ARG	NE-CZ-NH1	-5.24	117.68	120.30
1	G	269	ARG	NE-CZ-NH1	-5.21	117.70	120.30
1	J	312	GLY	N-CA-C	5.16	126.00	113.10
1	C	269	ARG	NE-CZ-NH2	5.10	122.85	120.30
1	G	155	ARG	NE-CZ-NH1	5.07	122.83	120.30
1	J	313	MET	N-CA-C	5.02	124.56	111.00
1	G	324	LYS	N-CA-C	5.02	124.54	111.00

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	326	GLY	Peptide
1	E	5	ARG	Peptide
1	F	319	PRO	Peptide
1	F	325	TRP	Peptide
1	F	7	SER	Peptide
1	G	326	GLY	Peptide
1	I	311	TYR	Peptide
1	I	317	TYR	Peptide
1	I	321	LEU	Peptide

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2736	0	2797	108	0
1	B	2728	0	2779	117	0
1	C	2726	0	2778	110	2
1	D	2730	0	2786	93	1
1	E	2730	0	2786	102	2
1	F	2793	0	2826	119	2
1	G	2790	0	2820	106	0
1	H	2767	0	2808	114	2
1	I	2776	0	2808	128	1
1	J	2763	0	2815	116	0
2	A	1	0	0	1	0
2	B	1	0	0	0	0
2	D	2	0	0	0	0
2	F	1	0	0	0	0
2	G	2	0	0	0	0
3	A	2	0	0	0	0
3	B	1	0	0	0	0
3	C	2	0	0	0	0
3	D	5	0	0	0	0
3	E	1	0	0	0	0
3	F	3	0	0	0	0
3	G	3	0	0	0	0
3	H	1	0	0	0	0
3	J	3	0	0	0	0
4	A	2	0	0	2	0
4	B	3	0	0	0	0
4	C	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
4	G	1	0	0	0	0
4	H	2	0	0	0	0
4	I	2	0	0	0	0
All	All	27580	0	28003	980	5

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 18.

All (980) 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:I:320:GLU:CB	1:I:321:LEU:HA	1.72	1.19
1:A:186:GLU:OE1	1:B:6:LEU:HG	1.45	1.16
1:E:165:ARG:HH12	1:E:243:ILE:HD13	1.01	1.16
1:H:165:ARG:HH12	1:H:243:ILE:HD13	0.99	1.13
1:A:165:ARG:HH12	1:A:243:ILE:HD13	0.98	1.11
1:J:165:ARG:HH12	1:J:243:ILE:HD13	0.98	1.10
1:G:165:ARG:NH1	1:G:243:ILE:HD13	1.68	1.08
1:I:165:ARG:HH12	1:I:243:ILE:HD13	0.91	1.07
1:D:165:ARG:HH12	1:D:243:ILE:HD13	0.95	1.07
1:E:240:PRO:HB2	1:E:241:PRO:CD	1.86	1.06
1:C:165:ARG:NH1	1:C:243:ILE:HD13	1.69	1.06
1:B:165:ARG:NH1	1:B:243:ILE:HD13	1.70	1.06
1:F:165:ARG:HH12	1:F:243:ILE:HD13	0.91	1.06
1:F:311:TYR:HD2	1:I:313:MET:HE2	1.16	1.06
1:I:165:ARG:NH1	1:I:243:ILE:HD13	1.72	1.04
1:F:165:ARG:NH1	1:F:243:ILE:HD13	1.72	1.03
1:C:165:ARG:HH12	1:C:243:ILE:HD13	0.87	1.03
1:I:307:ILE:HD11	1:I:334:MET:HG2	1.39	1.02
1:A:240:PRO:HB2	1:A:241:PRO:CD	1.89	1.01
1:G:165:ARG:HH12	1:G:243:ILE:HD13	0.88	1.01
1:H:321:LEU:HA	1:H:322:ARG:CB	1.89	1.01
1:B:165:ARG:HH12	1:B:243:ILE:HD13	0.88	1.00
1:B:240:PRO:HB2	1:B:241:PRO:CD	1.91	1.00
1:J:240:PRO:HB2	1:J:241:PRO:CD	1.90	1.00
1:H:240:PRO:HB2	1:H:241:PRO:CD	1.92	0.99
1:F:240:PRO:HB2	1:F:241:PRO:CD	1.93	0.99
1:F:311:TYR:CD2	1:I:313:MET:HE2	1.97	0.98
1:D:165:ARG:NH1	1:D:243:ILE:HD13	1.77	0.98
1:C:240:PRO:HB2	1:C:241:PRO:CD	1.93	0.98
1:F:300:ILE:HG22	1:F:341:MET:HG3	1.46	0.97
1:D:240:PRO:HB2	1:D:241:PRO:CD	1.95	0.97
1:G:313:MET:CB	1:H:311:TYR:HB3	1.96	0.96
1:E:237:ARG:NH2	1:E:237:ARG:HB2	1.79	0.95
1:G:240:PRO:HB2	1:G:241:PRO:CD	1.96	0.95
1:A:165:ARG:NH1	1:A:243:ILE:HD13	1.81	0.95
1:J:165:ARG:NH1	1:J:243:ILE:HD13	1.82	0.95
1:H:165:ARG:NH1	1:H:243:ILE:HD13	1.82	0.95
1:E:244:GLU:O	1:E:246:GLU:N	2.00	0.94
1:I:240:PRO:HB2	1:I:241:PRO:CD	1.97	0.94
1:G:165:ARG:HH12	1:G:243:ILE:CD1	1.79	0.94
1:G:299:THR:HG21	1:G:345:PHE:CZ	2.02	0.94
1:I:244:GLU:O	1:I:246:GLU:N	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:244:GLU:O	1:G:246:GLU:N	2.00	0.94
1:A:237:ARG:NH2	1:A:237:ARG:HB2	1.83	0.93
1:J:83:HIS:ND1	1:J:84:PRO:HD2	1.83	0.93
1:H:237:ARG:NH2	1:H:237:ARG:HB2	1.84	0.92
1:H:244:GLU:O	1:H:246:GLU:N	2.01	0.92
1:E:165:ARG:NH1	1:E:243:ILE:HD13	1.83	0.92
1:J:244:GLU:O	1:J:246:GLU:N	2.02	0.92
1:F:244:GLU:O	1:F:246:GLU:N	2.01	0.92
1:B:237:ARG:HB2	1:B:237:ARG:NH2	1.83	0.92
1:E:240:PRO:HB2	1:E:241:PRO:HD2	1.50	0.92
1:C:307:ILE:HD11	1:C:334:MET:HG2	1.52	0.92
1:F:237:ARG:NH2	1:F:237:ARG:HB2	1.84	0.91
1:J:237:ARG:NH2	1:J:237:ARG:HB2	1.84	0.91
1:C:165:ARG:HH12	1:C:243:ILE:CD1	1.80	0.91
1:I:165:ARG:HH12	1:I:243:ILE:CD1	1.83	0.90
1:B:307:ILE:HD11	1:B:334:MET:HG2	1.52	0.90
1:J:240:PRO:HB2	1:J:241:PRO:HD2	1.50	0.90
1:A:240:PRO:HB2	1:A:241:PRO:HD2	1.54	0.90
1:B:165:ARG:HH12	1:B:243:ILE:CD1	1.81	0.89
1:A:307:ILE:HD11	1:A:334:MET:HG2	1.52	0.89
1:E:19:TYR:CZ	1:E:21:GLY:HA3	2.08	0.89
1:B:83:HIS:ND1	1:B:84:PRO:HD2	1.89	0.88
1:D:237:ARG:HB2	1:D:237:ARG:NH2	1.89	0.88
1:I:237:ARG:HB2	1:I:237:ARG:NH2	1.89	0.87
1:A:244:GLU:O	1:A:246:GLU:N	2.07	0.87
1:C:244:GLU:O	1:C:246:GLU:N	2.07	0.87
1:F:99:VAL:HG22	1:F:231:VAL:HG13	1.57	0.87
1:C:237:ARG:NH2	1:C:237:ARG:HB2	1.89	0.86
1:F:308:ALA:HA	1:I:313:MET:HE3	1.57	0.86
1:D:99:VAL:HG22	1:D:231:VAL:HG13	1.55	0.86
1:G:240:PRO:HB2	1:G:241:PRO:HD2	1.55	0.86
1:G:299:THR:HG21	1:G:345:PHE:HZ	1.39	0.86
1:B:244:GLU:O	1:B:246:GLU:N	2.09	0.86
1:D:240:PRO:HB2	1:D:241:PRO:HD2	1.56	0.86
1:G:237:ARG:HB2	1:G:237:ARG:NH2	1.89	0.86
1:D:244:GLU:O	1:D:246:GLU:N	2.09	0.85
1:F:240:PRO:HB2	1:F:241:PRO:HD2	1.57	0.85
1:F:311:TYR:HD2	1:I:313:MET:CE	1.88	0.85
1:D:165:ARG:HH12	1:D:243:ILE:CD1	1.87	0.85
1:H:307:ILE:HD11	1:H:334:MET:HG2	1.59	0.85
1:G:19:TYR:CZ	1:G:21:GLY:HA3	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:165:ARG:HH12	1:F:243:ILE:CD1	1.84	0.84
1:A:83:HIS:ND1	1:A:84:PRO:HD2	1.93	0.83
1:J:6:LEU:HD23	1:J:8:ALA:H	1.41	0.83
1:A:61:TRP:HB2	1:A:169:LEU:HD21	1.61	0.83
1:A:348:LYS:HE2	1:A:349:LYS:H	1.43	0.83
1:D:348:LYS:HE2	1:D:349:LYS:H	1.39	0.83
1:A:299:THR:HG21	1:A:345:PHE:CZ	2.13	0.83
1:F:19:TYR:CZ	1:F:21:GLY:HA3	2.14	0.82
1:C:19:TYR:CZ	1:C:21:GLY:HA3	2.14	0.82
1:C:348:LYS:HE2	1:C:349:LYS:H	1.44	0.82
1:I:240:PRO:HB2	1:I:241:PRO:HD2	1.62	0.82
1:C:263:ASP:HB3	1:E:223:LYS:HD2	1.60	0.82
1:H:83:HIS:ND1	1:H:84:PRO:HD2	1.93	0.82
1:G:307:ILE:HD11	1:G:334:MET:HG2	1.61	0.82
1:B:240:PRO:HB2	1:B:241:PRO:HD2	1.62	0.81
1:E:83:HIS:ND1	1:E:84:PRO:HD2	1.95	0.81
1:C:83:HIS:ND1	1:C:84:PRO:HD2	1.94	0.81
1:B:99:VAL:CG2	1:B:231:VAL:HG13	2.11	0.81
1:C:240:PRO:HB2	1:C:241:PRO:HD2	1.61	0.81
1:E:61:TRP:HB2	1:E:169:LEU:HD21	1.62	0.81
1:I:19:TYR:CZ	1:I:21:GLY:HA3	2.16	0.80
1:E:237:ARG:HB2	1:E:237:ARG:HH21	1.47	0.80
1:I:99:VAL:HG22	1:I:231:VAL:HG13	1.64	0.80
1:F:348:LYS:HE2	1:F:349:LYS:H	1.45	0.80
1:B:99:VAL:HG22	1:B:231:VAL:HG13	1.63	0.80
1:H:240:PRO:HB2	1:H:241:PRO:HD2	1.63	0.80
1:H:313:MET:HB3	1:J:311:TYR:HD2	1.47	0.80
1:A:223:LYS:HD2	1:D:263:ASP:HB3	1.64	0.80
1:H:320:GLU:O	1:H:322:ARG:CB	2.30	0.80
1:G:348:LYS:HE2	1:G:349:LYS:H	1.46	0.79
1:H:99:VAL:HG22	1:H:231:VAL:HG13	1.64	0.79
1:B:311:TYR:HE2	1:B:330:VAL:HG21	1.47	0.79
1:I:29:ILE:HG21	1:I:50:VAL:HG11	1.63	0.79
1:H:348:LYS:HE2	1:H:349:LYS:H	1.47	0.78
1:I:337:ILE:HA	1:I:340:ILE:HG12	1.66	0.78
1:D:299:THR:HG21	1:D:345:PHE:CZ	2.19	0.78
1:E:237:ARG:HH21	1:E:237:ARG:CB	1.97	0.77
1:I:348:LYS:HE2	1:I:349:LYS:H	1.48	0.77
1:D:299:THR:HG21	1:D:345:PHE:HZ	1.47	0.77
1:C:99:VAL:HG22	1:C:231:VAL:HG13	1.67	0.77
1:J:29:ILE:HG21	1:J:50:VAL:HG11	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:ARG:HB2	1:A:237:ARG:HH21	1.46	0.77
1:D:83:HIS:ND1	1:D:84:PRO:HD2	1.99	0.77
1:J:99:VAL:HG22	1:J:231:VAL:HG13	1.67	0.77
1:E:348:LYS:HE2	1:E:349:LYS:H	1.49	0.77
1:A:299:THR:HG21	1:A:345:PHE:HZ	1.50	0.76
1:E:300:ILE:HG22	1:E:341:MET:HG3	1.66	0.76
1:G:168:TYR:OH	1:H:14:PRO:HG2	1.85	0.76
1:D:9:LYS:HG3	1:D:9:LYS:O	1.85	0.76
1:J:237:ARG:HB2	1:J:237:ARG:HH21	1.49	0.76
1:B:348:LYS:HE2	1:B:349:LYS:H	1.51	0.76
1:E:307:ILE:HD11	1:E:334:MET:HG2	1.68	0.76
1:J:337:ILE:HA	1:J:340:ILE:HG12	1.67	0.76
1:F:311:TYR:CD2	1:I:313:MET:CE	2.66	0.76
1:H:313:MET:C	1:J:311:TYR:HB3	2.06	0.75
1:I:83:HIS:ND1	1:I:84:PRO:HD2	2.00	0.75
1:A:263:ASP:HB3	1:B:223:LYS:HD2	1.67	0.75
1:H:99:VAL:CG2	1:H:231:VAL:HG13	2.16	0.75
1:H:237:ARG:HB2	1:H:237:ARG:HH21	1.52	0.75
1:J:61:TRP:HB2	1:J:169:LEU:HD21	1.68	0.75
1:J:5:ARG:HD3	1:J:22:LYS:HB2	1.68	0.75
1:A:99:VAL:HG22	1:A:231:VAL:HG13	1.68	0.74
1:F:237:ARG:CB	1:F:237:ARG:HH21	2.00	0.74
1:A:253:ASP:OD1	4:A:2002:HOH:O	2.05	0.74
1:A:337:ILE:HA	1:A:340:ILE:HG12	1.69	0.74
1:A:29:ILE:HG21	1:A:50:VAL:HG11	1.70	0.74
1:E:9:LYS:O	1:E:9:LYS:HG3	1.87	0.74
1:J:348:LYS:HE2	1:J:349:LYS:H	1.53	0.74
1:D:201:GLU:C	1:D:203:PRO:HD3	2.08	0.74
1:F:61:TRP:HB2	1:F:169:LEU:HD21	1.69	0.74
1:C:337:ILE:HA	1:C:340:ILE:HG12	1.70	0.73
1:D:307:ILE:HD11	1:D:334:MET:HG2	1.68	0.73
1:J:234:SER:O	1:J:238:ASP:HB2	1.88	0.73
1:H:263:ASP:HB3	1:J:223:LYS:HD2	1.69	0.73
1:E:99:VAL:HG22	1:E:231:VAL:HG13	1.70	0.73
1:H:201:GLU:C	1:H:203:PRO:HD3	2.09	0.73
1:H:313:MET:HB3	1:J:311:TYR:CD2	2.24	0.73
1:F:337:ILE:HA	1:F:340:ILE:HG12	1.70	0.73
1:E:201:GLU:C	1:E:203:PRO:HD3	2.09	0.72
1:B:40:ARG:HH11	1:B:40:ARG:HB2	1.53	0.72
1:H:237:ARG:HH21	1:H:237:ARG:CB	2.02	0.72
1:B:237:ARG:HB2	1:B:237:ARG:HH21	1.51	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:29:ILE:HG21	1:F:50:VAL:HG11	1.72	0.72
1:G:201:GLU:C	1:G:203:PRO:HD3	2.10	0.72
1:A:201:GLU:C	1:A:203:PRO:HD3	2.10	0.72
1:B:237:ARG:HH21	1:B:237:ARG:CB	2.03	0.72
1:B:299:THR:HG21	1:B:345:PHE:CZ	2.25	0.72
1:J:19:TYR:CZ	1:J:21:GLY:HA3	2.24	0.72
1:D:14:PRO:HG3	1:E:171:TYR:OH	1.90	0.71
1:E:6:LEU:O	1:E:7:SER:HB3	1.88	0.71
1:J:299:THR:HG21	1:J:345:PHE:CZ	2.24	0.71
4:A:2002:HOH:O	1:B:89:ASP:OD1	2.09	0.71
1:B:201:GLU:C	1:B:203:PRO:HD3	2.11	0.71
1:F:201:GLU:C	1:F:203:PRO:HD3	2.11	0.71
1:A:234:SER:O	1:A:238:ASP:HB2	1.89	0.71
1:G:9:LYS:O	1:G:9:LYS:HG3	1.89	0.71
1:H:337:ILE:HA	1:H:340:ILE:HG12	1.72	0.71
1:B:337:ILE:HA	1:B:340:ILE:HG12	1.72	0.71
1:E:29:ILE:HG21	1:E:50:VAL:HG11	1.71	0.71
1:G:83:HIS:ND1	1:G:84:PRO:HD2	2.05	0.71
1:G:337:ILE:HA	1:G:340:ILE:HG12	1.73	0.71
1:A:237:ARG:HH21	1:A:237:ARG:CB	2.04	0.71
1:B:240:PRO:HB2	1:B:241:PRO:HD3	1.73	0.71
1:F:6:LEU:HB3	1:I:186:GLU:OE1	1.90	0.71
1:F:307:ILE:HD11	1:F:334:MET:HG2	1.73	0.71
1:I:299:THR:HG21	1:I:345:PHE:CZ	2.26	0.70
1:D:237:ARG:HB2	1:D:237:ARG:HH21	1.56	0.70
1:D:237:ARG:HH21	1:D:237:ARG:CB	2.05	0.70
1:E:165:ARG:HH12	1:E:243:ILE:CD1	1.93	0.70
1:B:29:ILE:HG21	1:B:50:VAL:HG11	1.72	0.70
1:D:19:TYR:CZ	1:D:21:GLY:HA3	2.27	0.70
1:D:29:ILE:HG21	1:D:50:VAL:HG11	1.73	0.70
1:F:320:GLU:N	1:F:321:LEU:O	2.25	0.70
1:G:234:SER:O	1:G:238:ASP:HB2	1.91	0.70
1:C:29:ILE:HG21	1:C:50:VAL:HG11	1.72	0.70
1:G:263:ASP:HB3	1:H:223:LYS:HD2	1.72	0.70
1:H:321:LEU:CA	1:H:322:ARG:CB	2.68	0.70
1:H:29:ILE:HG21	1:H:50:VAL:HG11	1.72	0.70
1:E:337:ILE:HA	1:E:340:ILE:HG12	1.72	0.70
1:H:19:TYR:CZ	1:H:21:GLY:HA3	2.27	0.69
1:J:6:LEU:CD2	1:J:8:ALA:H	2.04	0.69
1:I:201:GLU:C	1:I:203:PRO:HD3	2.13	0.69
1:D:234:SER:O	1:D:238:ASP:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:337:ILE:HA	1:D:340:ILE:HG12	1.73	0.69
1:B:300:ILE:HG22	1:B:341:MET:HG3	1.75	0.69
1:J:201:GLU:C	1:J:203:PRO:HD3	2.13	0.69
1:F:234:SER:O	1:F:238:ASP:HB2	1.93	0.69
1:A:19:TYR:CZ	1:A:21:GLY:HA3	2.28	0.69
1:F:237:ARG:HB2	1:F:237:ARG:HH21	1.50	0.69
1:H:299:THR:HG21	1:H:345:PHE:CZ	2.27	0.69
1:I:237:ARG:CB	1:I:237:ARG:HH21	2.05	0.69
1:C:300:ILE:HG22	1:C:341:MET:HG3	1.75	0.69
1:D:61:TRP:HB2	1:D:169:LEU:HD21	1.74	0.69
1:H:240:PRO:HB2	1:H:241:PRO:HD3	1.73	0.69
1:A:186:GLU:OE1	1:B:6:LEU:CG	2.35	0.68
1:D:99:VAL:CG2	1:D:231:VAL:HG13	2.23	0.68
1:G:61:TRP:HB2	1:G:169:LEU:HD21	1.75	0.68
1:J:237:ARG:HH21	1:J:237:ARG:CB	2.05	0.68
1:C:93:VAL:O	1:C:111:LYS:NZ	2.26	0.68
1:E:5:ARG:CB	1:E:6:LEU:HB2	2.24	0.68
1:B:61:TRP:HB2	1:B:169:LEU:HD21	1.74	0.68
1:C:201:GLU:C	1:C:203:PRO:HD3	2.14	0.68
1:H:299:THR:HG21	1:H:345:PHE:CE1	2.28	0.68
1:F:40:ARG:HH11	1:F:40:ARG:HB2	1.59	0.68
1:H:200:LEU:HD22	1:J:209:GLN:HG3	1.76	0.68
1:I:61:TRP:HB2	1:I:169:LEU:HD21	1.76	0.68
1:B:200:LEU:HD22	1:C:209:GLN:HG3	1.76	0.68
1:C:40:ARG:HH11	1:C:40:ARG:HB2	1.59	0.68
1:B:234:SER:O	1:B:238:ASP:HB2	1.94	0.67
1:G:99:VAL:HG22	1:G:231:VAL:HG13	1.76	0.67
1:I:321:LEU:CB	1:I:322:ARG:CB	2.73	0.67
1:C:61:TRP:HB2	1:C:169:LEU:HD21	1.75	0.67
1:I:40:ARG:HH11	1:I:40:ARG:HB2	1.59	0.67
1:I:225:ILE:HD13	1:I:265:VAL:HG21	1.74	0.67
1:J:307:ILE:HD11	1:J:334:MET:HG2	1.75	0.67
1:F:6:LEU:HD13	1:F:7:SER:H	1.58	0.67
1:G:29:ILE:HG21	1:G:50:VAL:HG11	1.77	0.67
1:B:240:PRO:CB	1:B:241:PRO:CD	2.73	0.66
1:F:83:HIS:ND1	1:F:84:PRO:HD2	2.10	0.66
1:F:308:ALA:HA	1:I:313:MET:CE	2.25	0.66
1:A:304:LEU:HB3	1:D:306:PHE:CE2	2.31	0.66
1:E:234:SER:O	1:E:238:ASP:HB2	1.95	0.66
1:F:99:VAL:CG2	1:F:231:VAL:HG13	2.24	0.66
1:A:165:ARG:HH12	1:A:243:ILE:CD1	1.92	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:304:LEU:HB3	1:J:306:PHE:CE2	2.31	0.66
1:C:237:ARG:CB	1:C:237:ARG:HH21	2.07	0.66
1:I:237:ARG:HB2	1:I:237:ARG:HH21	1.59	0.66
1:B:232:LEU:HD22	1:B:254:VAL:HB	1.77	0.66
1:A:302:MET:HE1	1:B:298:ALA:HA	1.78	0.65
1:G:237:ARG:HB2	1:G:237:ARG:HH21	1.61	0.65
1:H:234:SER:O	1:H:238:ASP:HB2	1.96	0.65
1:A:302:MET:CE	1:B:298:ALA:HA	2.27	0.65
1:J:9:LYS:O	1:J:9:LYS:HG3	1.95	0.65
1:A:269:ARG:NH1	1:D:270:ASP:OD1	2.30	0.65
1:I:320:GLU:CB	1:I:321:LEU:CA	2.62	0.65
1:C:9:LYS:O	1:C:9:LYS:HG3	1.96	0.65
1:C:234:SER:O	1:C:238:ASP:HB2	1.97	0.65
1:A:40:ARG:HH11	1:A:40:ARG:HB2	1.61	0.64
1:J:232:LEU:HD22	1:J:254:VAL:HB	1.77	0.64
1:C:240:PRO:HB2	1:C:241:PRO:HD3	1.79	0.64
1:E:240:PRO:HB2	1:E:241:PRO:HD3	1.76	0.64
1:G:237:ARG:HH21	1:G:237:ARG:CB	2.11	0.64
1:F:9:LYS:HG3	1:F:9:LYS:O	1.97	0.64
1:H:9:LYS:O	1:H:9:LYS:HG3	1.96	0.64
1:B:19:TYR:CZ	1:B:21:GLY:HA3	2.32	0.64
1:I:14:PRO:HG3	1:J:171:TYR:OH	1.98	0.64
1:H:165:ARG:HH12	1:H:243:ILE:CD1	1.93	0.64
1:J:99:VAL:CG2	1:J:231:VAL:HG13	2.27	0.64
1:C:299:THR:HG21	1:C:345:PHE:CZ	2.33	0.64
1:G:326:GLY:CA	1:G:328:PRO:HD2	2.28	0.64
1:I:299:THR:HG21	1:I:345:PHE:HZ	1.60	0.64
1:J:40:ARG:HH11	1:J:40:ARG:HB2	1.61	0.64
1:A:240:PRO:HB2	1:A:241:PRO:HD3	1.76	0.63
1:G:300:ILE:HG22	1:G:341:MET:HG3	1.80	0.63
1:H:40:ARG:HB2	1:H:40:ARG:HH11	1.63	0.63
1:B:299:THR:HG21	1:B:345:PHE:HZ	1.63	0.63
1:I:319:PRO:HB3	1:I:320:GLU:HA	1.81	0.63
1:F:223:LYS:HD2	1:I:263:ASP:HB3	1.81	0.62
1:I:234:SER:O	1:I:238:ASP:HB2	1.99	0.62
1:F:263:ASP:HB3	1:G:223:LYS:HD2	1.81	0.62
1:C:237:ARG:NH2	1:C:237:ARG:CB	2.62	0.62
1:C:99:VAL:CG2	1:C:231:VAL:HG13	2.29	0.62
1:E:286:LYS:O	1:E:287:THR:C	2.38	0.62
1:I:297:ILE:HG21	1:J:299:THR:HA	1.82	0.62
1:I:99:VAL:CG2	1:I:231:VAL:HG13	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:40:ARG:HH11	1:D:40:ARG:HB2	1.63	0.61
1:D:61:TRP:HE1	1:D:138:MET:HE2	1.63	0.61
1:A:311:TYR:HE2	1:A:330:VAL:HG21	1.65	0.61
1:J:6:LEU:HD23	1:J:7:SER:N	2.15	0.61
1:A:225:ILE:HD13	1:A:265:VAL:HG21	1.82	0.61
1:B:9:LYS:O	1:B:9:LYS:HG3	2.00	0.61
1:B:306:PHE:CE2	1:C:304:LEU:HB3	2.36	0.61
1:B:118:ASN:HD22	1:B:119:LEU:N	1.99	0.61
1:F:299:THR:HG21	1:F:345:PHE:HZ	1.65	0.61
1:H:240:PRO:CB	1:H:241:PRO:CD	2.74	0.60
1:H:313:MET:HA	1:J:311:TYR:CB	2.31	0.60
1:I:311:TYR:HE2	1:I:330:VAL:HG21	1.66	0.60
1:G:240:PRO:CB	1:G:241:PRO:HD2	2.32	0.60
1:H:237:ARG:NH2	1:H:237:ARG:CB	2.61	0.60
1:E:232:LEU:HD22	1:E:254:VAL:HB	1.84	0.59
1:H:347:LYS:O	1:H:348:LYS:HB2	2.02	0.59
1:C:225:ILE:HD13	1:C:265:VAL:HG21	1.84	0.59
1:C:232:LEU:HD22	1:C:254:VAL:HB	1.83	0.59
1:H:61:TRP:HZ2	1:H:138:MET:HE1	1.67	0.59
1:J:240:PRO:CB	1:J:241:PRO:HD2	2.29	0.59
1:E:240:PRO:CB	1:E:241:PRO:HD2	2.29	0.59
1:C:299:THR:HG21	1:C:345:PHE:HZ	1.67	0.59
1:E:61:TRP:HZ2	1:E:138:MET:HE1	1.67	0.59
1:C:291:MET:HE1	1:E:291:MET:SD	2.43	0.59
1:I:291:MET:SD	1:J:291:MET:HE1	2.43	0.59
1:I:307:ILE:CD1	1:I:334:MET:HG2	2.24	0.59
1:B:40:ARG:HB2	1:B:40:ARG:NH1	2.17	0.59
1:A:347:LYS:O	1:A:348:LYS:HB2	2.03	0.58
1:A:240:PRO:CB	1:A:241:PRO:CD	2.73	0.58
1:C:240:PRO:CB	1:C:241:PRO:CD	2.77	0.58
1:F:240:PRO:CB	1:F:241:PRO:HD2	2.33	0.58
1:D:300:ILE:HG22	1:D:341:MET:HG3	1.84	0.58
1:G:299:THR:HG21	1:G:345:PHE:CE1	2.37	0.58
1:H:237:ARG:HB2	1:H:237:ARG:CZ	2.33	0.58
1:B:240:PRO:CB	1:B:241:PRO:HD2	2.31	0.58
1:I:240:PRO:HB2	1:I:241:PRO:HD3	1.85	0.58
1:J:326:GLY:C	1:J:328:PRO:HD2	2.24	0.58
1:D:291:MET:SD	1:E:291:MET:HE1	2.43	0.58
1:A:99:VAL:CG2	1:A:231:VAL:HG13	2.34	0.58
1:J:326:GLY:O	1:J:329:VAL:HB	2.04	0.58
1:F:319:PRO:O	1:F:321:LEU:O	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:225:ILE:HD13	1:H:265:VAL:HG21	1.86	0.58
1:B:229:ARG:HA	1:B:258:THR:HG21	1.86	0.57
1:B:237:ARG:HB2	1:B:237:ARG:CZ	2.33	0.57
1:D:237:ARG:NH2	1:D:237:ARG:CB	2.63	0.57
1:E:237:ARG:NH2	1:E:237:ARG:CB	2.56	0.57
1:F:240:PRO:HB2	1:F:241:PRO:HD3	1.81	0.57
1:H:313:MET:HA	1:J:311:TYR:HB2	1.86	0.57
1:I:9:LYS:HG3	1:I:9:LYS:O	2.04	0.57
1:J:313:MET:HG3	1:J:314:ASN:CB	2.34	0.57
1:G:291:MET:HE1	1:H:291:MET:SD	2.44	0.57
1:B:40:ARG:HH11	1:B:40:ARG:CB	2.18	0.57
1:D:14:PRO:HG3	1:E:171:TYR:CE2	2.39	0.57
1:D:229:ARG:HA	1:D:258:THR:CG2	2.34	0.57
1:G:299:THR:HA	1:H:297:ILE:HG21	1.85	0.57
1:A:232:LEU:HD22	1:A:254:VAL:HB	1.86	0.57
1:H:61:TRP:HB2	1:H:169:LEU:HD21	1.86	0.57
1:H:186:GLU:OE1	1:J:6:LEU:CD2	2.53	0.57
1:A:298:ALA:HA	1:D:302:MET:CE	2.35	0.57
1:F:300:ILE:HG22	1:F:341:MET:CG	2.30	0.57
1:A:291:MET:HE1	1:B:291:MET:SD	2.45	0.56
1:G:326:GLY:O	1:G:329:VAL:HB	2.04	0.56
1:E:17:LEU:HB3	1:E:91:LEU:CD1	2.35	0.56
1:I:118:ASN:HD22	1:I:119:LEU:N	2.04	0.56
1:B:225:ILE:HD13	1:B:265:VAL:HG21	1.86	0.56
1:E:99:VAL:CG2	1:E:231:VAL:HG13	2.35	0.56
1:E:229:ARG:HA	1:E:258:THR:HG21	1.87	0.56
1:E:240:PRO:CB	1:E:241:PRO:CD	2.72	0.56
1:F:237:ARG:NH2	1:F:237:ARG:CB	2.60	0.56
1:G:99:VAL:CG2	1:G:231:VAL:HG13	2.34	0.56
1:I:229:ARG:HA	1:I:258:THR:CG2	2.35	0.56
1:D:300:ILE:HG13	1:D:301:PHE:N	2.20	0.56
1:F:118:ASN:HD22	1:F:119:LEU:N	2.04	0.56
1:C:40:ARG:HB2	1:C:40:ARG:NH1	2.21	0.56
1:D:61:TRP:HZ2	1:D:138:MET:HE1	1.71	0.56
1:G:237:ARG:NH2	1:G:237:ARG:CB	2.65	0.56
1:H:186:GLU:OE1	1:J:6:LEU:HD23	2.06	0.56
1:I:40:ARG:HB2	1:I:40:ARG:NH1	2.20	0.56
1:E:40:ARG:HH11	1:E:40:ARG:HB2	1.71	0.56
1:F:211:THR:HG21	1:F:276:LEU:HD13	1.87	0.56
1:J:237:ARG:HB2	1:J:237:ARG:CZ	2.36	0.56
1:C:347:LYS:O	1:C:348:LYS:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:229:ARG:HA	1:E:258:THR:CG2	2.34	0.56
1:H:313:MET:CA	1:J:311:TYR:HB3	2.35	0.56
1:J:225:ILE:HD13	1:J:265:VAL:HG21	1.87	0.56
1:A:168:TYR:OH	1:B:14:PRO:HG2	2.06	0.56
1:E:16:THR:HG22	1:E:18:VAL:HG23	1.87	0.56
1:J:83:HIS:ND1	1:J:84:PRO:CD	2.66	0.56
1:D:223:LYS:HD2	1:E:263:ASP:HB3	1.88	0.55
1:E:237:ARG:HB2	1:E:237:ARG:CZ	2.35	0.55
1:I:237:ARG:NH2	1:I:237:ARG:CB	2.62	0.55
1:A:229:ARG:HA	1:A:258:THR:HG21	1.87	0.55
1:D:229:ARG:HA	1:D:258:THR:HG21	1.88	0.55
1:F:240:PRO:CB	1:F:241:PRO:CD	2.76	0.55
1:A:229:ARG:HA	1:A:258:THR:CG2	2.36	0.55
1:E:285:ASN:O	1:E:288:ASN:HB2	2.06	0.55
1:F:40:ARG:HH11	1:F:40:ARG:CB	2.20	0.55
1:F:308:ALA:CA	1:I:313:MET:HE3	2.34	0.55
1:B:221:LEU:HG	1:B:225:ILE:HD12	1.89	0.55
1:I:82:ILE:HD13	1:I:130:ILE:HD13	1.88	0.55
1:J:229:ARG:HA	1:J:258:THR:CG2	2.36	0.55
1:I:296:ILE:HA	1:I:299:THR:HG22	1.88	0.55
1:B:347:LYS:O	1:B:348:LYS:HB2	2.07	0.55
1:I:240:PRO:CB	1:I:241:PRO:CD	2.80	0.55
1:I:229:ARG:HA	1:I:258:THR:HG21	1.88	0.55
1:J:240:PRO:CB	1:J:241:PRO:CD	2.75	0.55
1:J:299:THR:HG21	1:J:345:PHE:HZ	1.67	0.55
1:A:240:PRO:CB	1:A:241:PRO:HD2	2.31	0.55
1:D:152:GLU:HB2	1:D:158:ARG:HH12	1.72	0.55
1:G:17:LEU:HB3	1:G:91:LEU:CD1	2.37	0.55
1:C:200:LEU:HD22	1:E:209:GLN:HG3	1.88	0.54
1:I:40:ARG:HH11	1:I:40:ARG:CB	2.20	0.54
1:J:347:LYS:O	1:J:348:LYS:HB2	2.07	0.54
1:H:221:LEU:HG	1:H:225:ILE:HD12	1.89	0.54
1:J:41:GLU:HG3	1:J:41:GLU:O	2.08	0.54
1:C:240:PRO:CB	1:C:241:PRO:HD2	2.36	0.54
1:G:347:LYS:O	1:G:348:LYS:HB2	2.07	0.54
1:I:347:LYS:O	1:I:348:LYS:HB2	2.06	0.54
1:J:118:ASN:HD22	1:J:119:LEU:N	2.04	0.54
1:A:51:LEU:N	1:A:52:PRO:HD2	2.23	0.54
1:A:298:ALA:HA	1:D:302:MET:HE1	1.89	0.54
1:B:229:ARG:HA	1:B:258:THR:CG2	2.37	0.54
1:D:347:LYS:O	1:D:348:LYS:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:240:PRO:CB	1:D:241:PRO:HD2	2.34	0.54
1:H:238:ASP:O	1:H:239:VAL:HG22	2.07	0.54
1:C:152:GLU:HB2	1:C:158:ARG:HH12	1.73	0.54
1:D:82:ILE:HD13	1:D:130:ILE:HD13	1.90	0.54
1:I:297:ILE:HG12	1:J:299:THR:OG1	2.08	0.54
1:F:40:ARG:HB2	1:F:40:ARG:NH1	2.23	0.54
1:A:294:LEU:HD22	1:B:294:LEU:HD11	1.90	0.54
1:H:232:LEU:HD22	1:H:254:VAL:HB	1.90	0.54
1:H:313:MET:CA	1:J:311:TYR:CB	2.86	0.54
1:C:291:MET:HB3	1:E:290:VAL:HG11	1.91	0.53
1:F:117:LYS:O	1:F:119:LEU:N	2.41	0.53
1:B:311:TYR:CE2	1:B:330:VAL:HG21	2.35	0.53
1:C:299:THR:HA	1:E:297:ILE:HG21	1.88	0.53
1:D:296:ILE:HA	1:D:299:THR:HG22	1.90	0.53
1:F:17:LEU:H	1:F:17:LEU:HD22	1.73	0.53
1:G:202:ARG:O	1:G:202:ARG:HG3	2.07	0.53
1:F:290:VAL:HG11	1:I:291:MET:HB3	1.90	0.53
1:I:298:ALA:HA	1:J:302:MET:HE1	1.88	0.53
1:E:292:LYS:NZ	1:E:348:LYS:HE3	2.22	0.53
1:G:51:LEU:N	1:G:52:PRO:HD2	2.24	0.53
1:G:240:PRO:CB	1:G:241:PRO:CD	2.79	0.53
1:H:291:MET:HE1	1:J:291:MET:SD	2.49	0.53
1:F:6:LEU:HD12	1:I:186:GLU:HG2	1.89	0.53
1:H:240:PRO:CB	1:H:241:PRO:HD2	2.34	0.53
1:C:237:ARG:HB2	1:C:237:ARG:HH21	1.61	0.53
1:G:311:TYR:HE2	1:G:330:VAL:HG21	1.74	0.53
1:B:17:LEU:HB3	1:B:91:LEU:CD1	2.39	0.53
1:C:125:GLU:HG3	1:C:141:GLU:HB2	1.91	0.53
1:H:248:VAL:N	1:H:249:PRO:HD2	2.24	0.53
1:I:240:PRO:CB	1:I:241:PRO:HD2	2.37	0.53
1:G:232:LEU:HD22	1:G:254:VAL:HB	1.91	0.53
1:I:300:ILE:HG22	1:I:341:MET:HG3	1.91	0.53
1:J:229:ARG:HA	1:J:258:THR:HG21	1.91	0.52
1:A:99:VAL:HG13	1:A:108:ILE:HG12	1.90	0.52
1:B:157:ASN:OD1	1:B:162:ARG:HG3	2.10	0.52
1:C:248:VAL:N	1:C:249:PRO:HD2	2.25	0.52
1:D:240:PRO:CB	1:D:241:PRO:CD	2.79	0.52
1:E:225:ILE:HD13	1:E:265:VAL:HG21	1.91	0.52
1:I:300:ILE:HG13	1:I:301:PHE:N	2.24	0.52
1:I:319:PRO:HA	1:I:320:GLU:O	2.09	0.52
1:D:14:PRO:HG3	1:E:171:TYR:CZ	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:240:PRO:HB2	1:D:241:PRO:HD3	1.85	0.52
1:E:61:TRP:HE1	1:E:138:MET:HE2	1.75	0.52
1:E:286:LYS:O	1:E:289:GLU:N	2.41	0.52
1:F:125:GLU:HG3	1:F:141:GLU:HB2	1.91	0.52
1:I:33:ASN:HB2	1:I:60:THR:HG23	1.91	0.52
1:B:286:LYS:O	1:B:290:VAL:HG23	2.08	0.52
1:C:311:TYR:HE2	1:C:330:VAL:HG11	1.75	0.52
1:D:25:GLU:OE2	1:I:23:TYR:HD1	1.93	0.52
1:A:299:THR:HG21	1:A:345:PHE:CE1	2.43	0.52
1:C:238:ASP:O	1:C:239:VAL:HG22	2.09	0.52
1:F:17:LEU:HB3	1:F:91:LEU:CD1	2.39	0.52
1:I:125:GLU:HG3	1:I:141:GLU:HB2	1.92	0.52
1:F:347:LYS:O	1:F:348:LYS:HB2	2.10	0.52
1:H:17:LEU:HB3	1:H:91:LEU:CD1	2.40	0.52
1:G:296:ILE:HA	1:G:299:THR:HG22	1.92	0.52
1:J:240:PRO:HB2	1:J:241:PRO:HD3	1.85	0.52
1:A:82:ILE:HD13	1:A:130:ILE:HD13	1.90	0.52
1:A:337:ILE:O	1:A:341:MET:HG2	2.10	0.52
1:J:40:ARG:HB2	1:J:40:ARG:NH1	2.24	0.52
1:A:311:TYR:CE2	1:A:330:VAL:HG21	2.45	0.51
1:F:202:ARG:O	1:F:202:ARG:HG3	2.10	0.51
1:E:6:LEU:O	1:E:7:SER:CB	2.58	0.51
1:F:153:ARG:CD	1:G:13:PRO:HG3	2.40	0.51
1:F:232:LEU:HD22	1:F:254:VAL:HB	1.92	0.51
1:G:40:ARG:HB2	1:G:40:ARG:HH11	1.75	0.51
1:A:300:ILE:HG13	1:A:301:PHE:N	2.26	0.51
1:G:302:MET:HE1	1:H:298:ALA:HA	1.93	0.51
1:H:40:ARG:HB2	1:H:40:ARG:NH1	2.25	0.51
1:A:41:GLU:O	1:A:41:GLU:HG3	2.10	0.51
1:F:16:THR:HG22	1:F:18:VAL:HG23	1.92	0.51
1:F:229:ARG:HA	1:F:258:THR:CG2	2.41	0.51
1:G:248:VAL:N	1:G:249:PRO:HD2	2.25	0.51
1:C:237:ARG:HB2	1:C:237:ARG:CZ	2.41	0.51
1:F:171:TYR:OH	1:G:14:PRO:HG3	2.09	0.51
1:E:300:ILE:HG13	1:E:301:PHE:N	2.25	0.51
1:G:132:THR:HG23	1:G:132:THR:O	2.11	0.51
1:A:291:MET:SD	1:D:291:MET:HE1	2.51	0.51
1:C:118:ASN:HD22	1:C:119:LEU:N	2.08	0.51
1:C:296:ILE:HA	1:C:299:THR:HG22	1.93	0.51
1:D:51:LEU:N	1:D:52:PRO:HD2	2.26	0.51
1:G:196:GLU:OE1	1:H:212:HIS:NE2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:211:THR:HG21	1:G:276:LEU:HD13	1.93	0.51
1:I:51:LEU:N	1:I:52:PRO:HD2	2.26	0.51
1:F:7:SER:O	1:I:182:PHE:HB3	2.11	0.51
1:I:184:LEU:HD21	1:I:221:LEU:HD11	1.93	0.51
1:A:33:ASN:HB2	1:A:60:THR:HG23	1.92	0.50
1:I:298:ALA:HA	1:J:302:MET:CE	2.40	0.50
1:B:263:ASP:HB3	1:C:223:LYS:HD2	1.92	0.50
1:C:40:ARG:HH11	1:C:40:ARG:CB	2.23	0.50
1:I:237:ARG:HB2	1:I:237:ARG:CZ	2.41	0.50
1:H:33:ASN:HB2	1:H:60:THR:HG23	1.94	0.50
1:I:61:TRP:HZ2	1:I:138:MET:HE1	1.77	0.50
1:A:297:ILE:HG21	1:D:299:THR:HA	1.92	0.50
1:H:51:LEU:N	1:H:52:PRO:HD2	2.25	0.50
1:H:118:ASN:HD22	1:H:119:LEU:N	2.09	0.50
1:B:99:VAL:HG13	1:B:108:ILE:HG12	1.93	0.50
1:D:125:GLU:HG3	1:D:141:GLU:HB2	1.92	0.50
1:H:306:PHE:CE2	1:J:304:LEU:HB3	2.46	0.50
1:B:194:VAL:O	1:B:197:GLU:HB2	2.11	0.50
1:D:118:ASN:HD22	1:D:119:LEU:N	2.09	0.50
1:F:229:ARG:HA	1:F:258:THR:HG21	1.94	0.50
1:D:337:ILE:O	1:D:341:MET:HG2	2.12	0.50
1:E:347:LYS:O	1:E:348:LYS:HB2	2.11	0.50
1:I:202:ARG:O	1:I:202:ARG:HG3	2.10	0.50
1:J:258:THR:HG22	1:J:259:ILE:N	2.27	0.50
1:B:16:THR:HG22	1:B:18:VAL:HG23	1.94	0.50
1:C:299:THR:OG1	1:E:297:ILE:HG12	2.11	0.50
1:A:40:ARG:HB2	1:A:40:ARG:NH1	2.24	0.50
1:B:153:ARG:HD3	1:C:13:PRO:HG3	1.94	0.50
1:C:61:TRP:HE1	1:C:138:MET:HE2	1.77	0.50
1:F:41:GLU:O	1:F:41:GLU:HG3	2.12	0.50
1:A:299:THR:HA	1:B:297:ILE:HG21	1.94	0.49
1:F:153:ARG:HD3	1:G:13:PRO:HG3	1.94	0.49
1:A:310:ILE:O	1:A:312:GLY:HA2	2.12	0.49
1:D:238:ASP:O	1:D:239:VAL:HG22	2.12	0.49
1:F:290:VAL:HG12	1:I:291:MET:HE3	1.93	0.49
1:G:294:LEU:HD22	1:H:294:LEU:HD11	1.94	0.49
1:J:117:LYS:O	1:J:119:LEU:N	2.44	0.49
1:F:285:ASN:O	1:F:288:ASN:HB2	2.12	0.49
1:J:104:ASN:O	1:J:105:TYR:HB3	2.11	0.49
1:A:40:ARG:HH11	1:A:40:ARG:CB	2.25	0.49
1:D:132:THR:O	1:D:132:THR:HG23	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:5:ARG:C	1:E:6:LEU:HD12	2.31	0.49
1:F:337:ILE:O	1:F:341:MET:HG2	2.12	0.49
1:G:255:TYR:O	1:G:258:THR:HG22	2.13	0.49
1:G:237:ARG:HB2	1:G:237:ARG:CZ	2.41	0.49
1:G:337:ILE:O	1:G:341:MET:HG2	2.11	0.49
1:C:270:ASP:OD1	1:E:269:ARG:NH1	2.46	0.49
1:E:40:ARG:HB2	1:E:40:ARG:NH1	2.27	0.49
1:E:272:VAL:O	1:E:275:LEU:HB2	2.13	0.49
1:A:152:GLU:HB2	1:A:158:ARG:HH12	1.77	0.49
1:B:300:ILE:HG13	1:B:301:PHE:N	2.27	0.49
1:C:184:LEU:HD21	1:C:221:LEU:HD11	1.94	0.49
1:D:211:THR:HG21	1:D:276:LEU:HD13	1.93	0.49
1:G:33:ASN:HB2	1:G:60:THR:HG23	1.94	0.49
1:G:313:MET:H	1:G:314:ASN:CB	2.25	0.49
1:J:17:LEU:HB3	1:J:91:LEU:CD1	2.43	0.49
1:J:61:TRP:HE1	1:J:138:MET:HE2	1.77	0.49
1:B:153:ARG:CD	1:C:13:PRO:HG3	2.43	0.49
1:F:327:TYR:N	1:F:328:PRO:HD2	2.28	0.49
1:I:194:VAL:O	1:I:197:GLU:HB2	2.13	0.49
1:I:232:LEU:HD22	1:I:254:VAL:HB	1.95	0.49
1:A:186:GLU:CD	1:B:6:LEU:HG	2.30	0.49
1:D:232:LEU:HD22	1:D:254:VAL:HB	1.93	0.49
1:D:348:LYS:HE2	1:D:349:LYS:N	2.19	0.49
1:G:326:GLY:HA2	1:G:328:PRO:HD2	1.93	0.49
1:B:337:ILE:O	1:B:341:MET:HG2	2.12	0.49
1:C:99:VAL:HG13	1:C:108:ILE:HG12	1.95	0.48
1:C:211:THR:HG21	1:C:276:LEU:HD13	1.94	0.48
1:E:298:ALA:O	1:E:302:MET:HG2	2.13	0.48
1:H:200:LEU:O	1:H:201:GLU:HG3	2.13	0.48
1:B:221:LEU:HG	1:B:225:ILE:CD1	2.43	0.48
1:G:229:ARG:HA	1:G:258:THR:CG2	2.44	0.48
1:I:223:LYS:HD2	1:J:263:ASP:HB3	1.94	0.48
1:J:238:ASP:HB3	1:J:239:VAL:H	1.53	0.48
1:A:202:ARG:O	1:A:202:ARG:HG3	2.11	0.48
1:E:51:LEU:N	1:E:52:PRO:HD2	2.28	0.48
1:H:337:ILE:O	1:H:341:MET:HG2	2.13	0.48
1:D:17:LEU:HB3	1:D:91:LEU:CD1	2.43	0.48
1:G:300:ILE:HG13	1:G:301:PHE:N	2.28	0.48
1:A:9:LYS:HG3	1:A:9:LYS:O	2.12	0.48
1:C:194:VAL:O	1:C:197:GLU:HB2	2.14	0.48
1:C:291:MET:HE2	1:E:291:MET:HG2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:221:LEU:HG	1:H:225:ILE:CD1	2.43	0.48
1:A:300:ILE:HG22	1:A:341:MET:HG3	1.96	0.48
1:D:33:ASN:HB2	1:D:60:THR:HG23	1.95	0.48
1:H:229:ARG:HA	1:H:258:THR:CG2	2.43	0.48
1:C:166:ALA:O	1:C:169:LEU:HB3	2.14	0.48
1:C:202:ARG:HG3	1:C:202:ARG:O	2.14	0.48
1:H:181:TYR:HB2	1:H:261:ILE:HD13	1.95	0.48
1:B:82:ILE:HD13	1:B:130:ILE:HD13	1.96	0.48
1:E:202:ARG:O	1:E:202:ARG:HG3	2.12	0.48
1:F:300:ILE:HG13	1:F:301:PHE:N	2.29	0.48
1:H:272:VAL:O	1:H:275:LEU:HB2	2.14	0.48
1:J:40:ARG:HH11	1:J:40:ARG:CB	2.27	0.48
1:C:196:GLU:OE1	1:E:212:HIS:NE2	2.47	0.48
1:F:237:ARG:HB2	1:F:237:ARG:CZ	2.42	0.48
1:B:195:LEU:HD21	1:B:211:THR:HA	1.96	0.47
1:C:300:ILE:HG13	1:C:301:PHE:N	2.29	0.47
1:E:120:HIS:HD2	1:E:191:GLU:OE2	1.97	0.47
1:I:311:TYR:CE2	1:I:330:VAL:HG21	2.49	0.47
1:B:225:ILE:O	1:B:228:LEU:HB3	2.14	0.47
1:J:296:ILE:HA	1:J:299:THR:HG22	1.96	0.47
1:A:103:GLU:HB3	1:A:104:ASN:OD1	2.14	0.47
1:B:67:ILE:HG21	1:B:139:PHE:HB3	1.97	0.47
1:E:242:LEU:O	1:E:243:ILE:C	2.52	0.47
1:E:337:ILE:O	1:E:341:MET:HG2	2.15	0.47
1:F:182:PHE:HB3	1:G:7:SER:O	2.15	0.47
1:G:40:ARG:HB2	1:G:40:ARG:NH1	2.28	0.47
1:H:117:LYS:O	1:H:119:LEU:N	2.46	0.47
1:C:291:MET:CE	1:E:291:MET:HG2	2.45	0.47
1:G:302:MET:CE	1:H:298:ALA:HA	2.43	0.47
1:B:296:ILE:HA	1:B:299:THR:HG22	1.96	0.47
1:C:238:ASP:HB3	1:C:239:VAL:H	1.55	0.47
1:E:296:ILE:HA	1:E:299:THR:HG22	1.97	0.47
1:I:327:TYR:CD2	1:J:314:ASN:O	2.68	0.47
1:A:61:TRP:HZ2	1:A:138:MET:HE1	1.78	0.47
1:A:125:GLU:HG3	1:A:141:GLU:HB2	1.96	0.47
1:A:272:VAL:O	1:A:275:LEU:HB2	2.14	0.47
1:A:307:ILE:CD1	1:A:334:MET:HG2	2.35	0.47
1:B:170:LEU:O	1:B:171:TYR:C	2.53	0.47
1:D:40:ARG:HB2	1:D:40:ARG:NH1	2.27	0.47
1:D:242:LEU:O	1:D:243:ILE:C	2.52	0.47
1:E:244:GLU:C	1:E:246:GLU:N	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:302:MET:HE1	1:G:298:ALA:HA	1.96	0.47
1:G:306:PHE:CE2	1:H:304:LEU:HB3	2.49	0.47
1:H:296:ILE:HA	1:H:299:THR:HG22	1.96	0.47
1:J:148:ASP:N	1:J:149:PRO:HD2	2.29	0.47
1:J:157:ASN:OD1	1:J:162:ARG:HG3	2.14	0.47
1:J:242:LEU:O	1:J:243:ILE:C	2.53	0.47
1:J:300:ILE:HG13	1:J:301:PHE:N	2.29	0.47
1:A:221:LEU:HG	1:A:225:ILE:HD12	1.96	0.47
1:A:306:PHE:CE2	1:B:304:LEU:HB3	2.50	0.47
1:D:311:TYR:HE2	1:D:330:VAL:HG21	1.80	0.47
1:F:244:GLU:C	1:F:246:GLU:N	2.68	0.47
1:G:244:GLU:C	1:G:246:GLU:N	2.68	0.47
1:J:238:ASP:O	1:J:239:VAL:HG22	2.14	0.47
1:B:299:THR:HG21	1:B:345:PHE:CE1	2.49	0.47
1:G:225:ILE:HD13	1:G:265:VAL:HG21	1.96	0.47
1:B:56:SER:HB3	1:B:58:THR:O	2.15	0.47
1:E:40:ARG:HH11	1:E:40:ARG:CB	2.27	0.47
1:H:230:GLU:OE1	1:H:230:GLU:HA	2.14	0.47
1:H:313:MET:HA	1:J:311:TYR:HB3	1.97	0.47
1:A:83:HIS:ND1	1:A:84:PRO:CD	2.70	0.46
1:C:291:MET:HE3	1:E:290:VAL:HG12	1.96	0.46
1:F:225:ILE:HD13	1:F:265:VAL:HG21	1.98	0.46
1:A:28:GLU:OE2	1:A:143:ILE:HD11	2.15	0.46
1:B:51:LEU:N	1:B:52:PRO:HD2	2.30	0.46
1:C:61:TRP:HZ2	1:C:138:MET:HE1	1.80	0.46
1:C:286:LYS:O	1:C:287:THR:C	2.53	0.46
1:J:125:GLU:HG3	1:J:141:GLU:HB2	1.97	0.46
1:A:343:VAL:HG12	1:A:343:VAL:O	2.15	0.46
1:D:237:ARG:HB2	1:D:237:ARG:CZ	2.43	0.46
1:E:33:ASN:HB2	1:E:60:THR:HG23	1.97	0.46
1:E:211:THR:HG21	1:E:276:LEU:HD13	1.96	0.46
1:I:17:LEU:HB3	1:I:91:LEU:CD1	2.46	0.46
1:I:301:PHE:CZ	1:J:303:PRO:HB3	2.50	0.46
1:B:33:ASN:HB2	1:B:60:THR:HG23	1.98	0.46
1:J:61:TRP:HZ2	1:J:138:MET:HE1	1.81	0.46
1:E:238:ASP:HB3	1:E:239:VAL:H	1.53	0.46
1:I:157:ASN:OD1	1:I:162:ARG:HG3	2.15	0.46
1:A:237:ARG:HB2	1:A:237:ARG:CZ	2.43	0.46
1:A:296:ILE:HA	1:A:299:THR:HG22	1.97	0.46
1:B:299:THR:HA	1:C:297:ILE:HG21	1.98	0.46
1:A:118:ASN:HD22	1:A:119:LEU:N	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:263:ASP:OD2	1:G:96:ARG:CZ	2.64	0.46
1:F:296:ILE:HA	1:F:299:THR:HG22	1.97	0.46
1:G:152:GLU:HB2	1:G:158:ARG:HH12	1.81	0.46
1:J:99:VAL:HG13	1:J:108:ILE:HG12	1.98	0.46
1:A:270:ASP:OD1	1:B:269:ARG:NH1	2.49	0.46
1:F:82:ILE:HD13	1:F:130:ILE:HD13	1.97	0.46
1:F:327:TYR:N	1:F:328:PRO:CD	2.79	0.46
1:G:194:VAL:O	1:G:197:GLU:HB2	2.15	0.46
1:G:221:LEU:HG	1:G:225:ILE:HD12	1.98	0.46
1:H:56:SER:HB3	1:H:58:THR:O	2.16	0.46
1:H:83:HIS:ND1	1:H:84:PRO:CD	2.74	0.46
1:I:211:THR:HG21	1:I:276:LEU:HD13	1.97	0.46
1:C:186:GLU:OE1	1:E:7:SER:HB3	2.16	0.46
1:C:348:LYS:CE	1:C:349:LYS:H	2.22	0.46
1:H:255:TYR:CZ	1:H:259:ILE:HD11	2.51	0.46
1:C:229:ARG:HA	1:C:258:THR:CG2	2.47	0.45
1:G:41:GLU:O	1:G:41:GLU:HG3	2.15	0.45
1:D:14:PRO:HG2	1:E:168:TYR:OH	2.16	0.45
1:E:41:GLU:O	1:E:41:GLU:HG3	2.15	0.45
1:F:51:LEU:N	1:F:52:PRO:HD2	2.31	0.45
1:H:17:LEU:HD22	1:H:17:LEU:H	1.81	0.45
1:I:13:PRO:HG3	1:J:153:ARG:HD3	1.97	0.45
1:I:209:GLN:HG3	1:J:200:LEU:HD22	1.99	0.45
1:I:276:LEU:HD12	1:I:276:LEU:HA	1.85	0.45
1:I:337:ILE:O	1:I:341:MET:HG2	2.17	0.45
1:A:117:LYS:O	1:A:119:LEU:N	2.49	0.45
1:C:51:LEU:N	1:C:52:PRO:HD2	2.31	0.45
1:C:337:ILE:O	1:C:341:MET:HG2	2.16	0.45
1:F:307:ILE:O	1:F:310:ILE:HG12	2.16	0.45
1:H:40:ARG:HH11	1:H:40:ARG:CB	2.27	0.45
1:A:221:LEU:HG	1:A:225:ILE:CD1	2.46	0.45
1:D:96:ARG:CZ	1:E:263:ASP:OD2	2.64	0.45
1:G:348:LYS:HE2	1:G:349:LYS:N	2.24	0.45
1:H:299:THR:HA	1:J:297:ILE:HG21	1.99	0.45
1:H:302:MET:CE	1:J:298:ALA:HA	2.47	0.45
1:J:96:ARG:HH11	1:J:227:PRO:HG3	1.81	0.45
1:B:238:ASP:O	1:B:239:VAL:HG22	2.16	0.45
1:J:300:ILE:HG22	1:J:341:MET:HG3	1.98	0.45
1:H:153:ARG:HD3	1:J:13:PRO:HG3	1.98	0.45
1:I:225:ILE:CD1	1:I:265:VAL:HG21	2.42	0.45
2:A:1350:CL:CL	1:B:14:PRO:HD2	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:118:ASN:ND2	1:B:119:LEU:N	2.65	0.45
1:C:33:ASN:HB2	1:C:60:THR:HG23	1.98	0.45
1:D:17:LEU:H	1:D:17:LEU:HD22	1.82	0.45
1:H:348:LYS:HE2	1:H:349:LYS:N	2.26	0.45
1:I:244:GLU:C	1:I:246:GLU:N	2.68	0.45
1:A:200:LEU:O	1:A:201:GLU:HG3	2.16	0.45
1:F:238:ASP:O	1:F:239:VAL:HG22	2.16	0.45
1:G:242:LEU:O	1:G:243:ILE:C	2.53	0.45
1:H:152:GLU:HB2	1:H:158:ARG:HH12	1.80	0.45
1:I:296:ILE:HG13	1:I:297:ILE:H	1.81	0.45
1:B:61:TRP:HE1	1:B:138:MET:HE2	1.81	0.45
1:B:330:VAL:O	1:B:334:MET:HG3	2.17	0.45
1:C:330:VAL:O	1:C:334:MET:HG3	2.17	0.45
1:D:40:ARG:HH11	1:D:40:ARG:CB	2.28	0.45
1:F:248:VAL:N	1:F:249:PRO:HD2	2.32	0.45
1:I:238:ASP:HB3	1:I:239:VAL:H	1.57	0.45
1:D:248:VAL:N	1:D:249:PRO:HD2	2.32	0.45
1:H:302:MET:HE1	1:J:298:ALA:HA	1.99	0.45
1:C:294:LEU:HD22	1:E:294:LEU:HD11	1.98	0.44
1:D:348:LYS:CE	1:D:349:LYS:H	2.20	0.44
1:H:211:THR:HG21	1:H:276:LEU:HD13	1.99	0.44
1:I:195:LEU:HD21	1:I:211:THR:HA	1.99	0.44
1:C:181:TYR:HB2	1:C:261:ILE:HD13	1.99	0.44
1:D:202:ARG:O	1:D:202:ARG:HG3	2.16	0.44
1:G:82:ILE:HD13	1:G:130:ILE:HD13	1.98	0.44
1:I:136:VAL:HG11	1:I:173:LEU:HD12	1.98	0.44
1:J:221:LEU:HG	1:J:225:ILE:HD12	1.99	0.44
1:J:248:VAL:N	1:J:249:PRO:HD2	2.32	0.44
1:B:83:HIS:ND1	1:B:84:PRO:CD	2.71	0.44
1:D:225:ILE:HD13	1:D:265:VAL:HG21	1.98	0.44
1:E:92:ASN:OD1	1:E:92:ASN:C	2.56	0.44
1:G:270:ASP:OD1	1:H:269:ARG:NH1	2.50	0.44
1:G:299:THR:CG2	1:G:345:PHE:CE1	3.00	0.44
1:J:33:ASN:HB2	1:J:60:THR:HG23	1.97	0.44
1:F:194:VAL:O	1:F:197:GLU:HB2	2.18	0.44
1:F:209:GLN:HG3	1:I:200:LEU:HD13	1.99	0.44
1:G:61:TRP:HZ2	1:G:138:MET:HE1	1.82	0.44
1:I:272:VAL:O	1:I:275:LEU:HB2	2.16	0.44
1:J:337:ILE:O	1:J:341:MET:HG2	2.16	0.44
1:C:341:MET:O	1:C:344:TYR:HB3	2.18	0.44
1:J:311:TYR:HE2	1:J:330:VAL:HG21	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:237:ARG:NH2	1:B:237:ARG:CB	2.61	0.44
1:C:298:ALA:O	1:C:302:MET:HG2	2.17	0.44
1:G:348:LYS:CE	1:G:349:LYS:H	2.24	0.44
1:I:54:ARG:HG3	1:I:80:PHE:CD1	2.53	0.44
1:A:302:MET:HE2	1:B:298:ALA:HA	1.99	0.44
1:B:221:LEU:HD12	1:B:221:LEU:HA	1.72	0.44
1:F:61:TRP:HE1	1:F:138:MET:HE2	1.83	0.44
1:H:242:LEU:O	1:H:243:ILE:C	2.55	0.44
1:H:326:GLY:H	1:H:328:PRO:HD2	1.82	0.44
1:I:10:LYS:H	1:I:10:LYS:HD2	1.83	0.44
1:J:16:THR:HG22	1:J:18:VAL:HG23	2.00	0.44
1:A:195:LEU:HD21	1:A:211:THR:HA	2.00	0.44
1:A:238:ASP:O	1:A:239:VAL:HG22	2.18	0.44
1:A:258:THR:HG22	1:A:259:ILE:N	2.33	0.44
1:A:312:GLY:O	1:B:311:TYR:HB2	2.18	0.44
1:D:99:VAL:HG13	1:D:108:ILE:HG12	1.99	0.44
1:D:297:ILE:HG21	1:E:299:THR:HA	1.99	0.44
1:E:184:LEU:HD21	1:E:221:LEU:HD11	1.99	0.44
1:F:327:TYR:H	1:F:328:PRO:HD2	1.82	0.44
1:I:311:TYR:HB3	1:J:313:MET:HB2	1.99	0.44
1:A:248:VAL:N	1:A:249:PRO:HD2	2.33	0.43
1:B:113:PHE:CE1	1:B:124:SER:HB3	2.53	0.43
1:B:312:GLY:O	1:C:311:TYR:HB2	2.18	0.43
1:D:16:THR:HG22	1:D:18:VAL:HG23	2.00	0.43
1:G:40:ARG:HH11	1:G:40:ARG:CB	2.30	0.43
1:H:202:ARG:HG3	1:H:202:ARG:O	2.17	0.43
1:H:313:MET:O	1:J:311:TYR:HB3	2.18	0.43
1:I:152:GLU:HB2	1:I:158:ARG:HH12	1.83	0.43
1:I:307:ILE:O	1:I:310:ILE:HG12	2.18	0.43
1:F:348:LYS:CE	1:F:349:LYS:H	2.23	0.43
1:J:221:LEU:HG	1:J:225:ILE:CD1	2.48	0.43
1:J:299:THR:HG21	1:J:345:PHE:CE1	2.53	0.43
1:C:16:THR:HG22	1:C:18:VAL:HG23	1.99	0.43
1:F:28:GLU:OE1	1:F:43:LYS:HD3	2.18	0.43
1:J:272:VAL:O	1:J:275:LEU:HB2	2.18	0.43
1:E:157:ASN:OD1	1:E:162:ARG:HG3	2.18	0.43
1:F:242:LEU:O	1:F:243:ILE:C	2.57	0.43
1:G:16:THR:HG22	1:G:18:VAL:HG23	1.99	0.43
1:G:85:LEU:HD23	1:G:85:LEU:HA	1.86	0.43
1:G:300:ILE:HG22	1:G:341:MET:CG	2.47	0.43
1:H:195:LEU:HD21	1:H:211:THR:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:330:VAL:O	1:H:334:MET:HG3	2.18	0.43
1:I:16:THR:HG22	1:I:18:VAL:HG23	2.00	0.43
1:F:56:SER:HB3	1:F:58:THR:O	2.18	0.43
1:F:148:ASP:OD1	1:F:151:ARG:NH1	2.52	0.43
1:F:299:THR:HG21	1:F:345:PHE:CZ	2.49	0.43
1:G:252:ARG:NH2	1:H:100:GLU:HG2	2.34	0.43
1:H:311:TYR:HE2	1:H:330:VAL:HG21	1.84	0.43
1:I:41:GLU:O	1:I:41:GLU:HG3	2.17	0.43
1:J:202:ARG:HG3	1:J:202:ARG:O	2.19	0.43
1:A:17:LEU:HB3	1:A:91:LEU:CD1	2.48	0.43
1:B:348:LYS:HE2	1:B:349:LYS:N	2.28	0.43
1:F:272:VAL:O	1:F:275:LEU:HB2	2.19	0.43
1:G:240:PRO:HB2	1:G:241:PRO:HD3	1.90	0.43
1:I:348:LYS:CE	1:I:349:LYS:H	2.26	0.43
1:B:118:ASN:HD22	1:B:118:ASN:C	2.22	0.43
1:F:291:MET:HE1	1:G:291:MET:SD	2.59	0.43
1:J:82:ILE:HD13	1:J:130:ILE:HD13	2.01	0.43
1:G:238:ASP:O	1:G:239:VAL:HG22	2.18	0.43
1:B:230:GLU:OE1	1:B:230:GLU:HA	2.19	0.43
1:G:19:TYR:CE1	1:G:21:GLY:HA3	2.53	0.43
1:G:117:LYS:O	1:G:119:LEU:N	2.51	0.43
1:H:237:ARG:HH21	1:H:237:ARG:HB3	1.81	0.43
1:I:61:TRP:CD1	1:I:61:TRP:C	2.92	0.43
1:I:237:ARG:HH21	1:I:237:ARG:HB3	1.81	0.43
1:A:111:LYS:O	1:A:177:LEU:HD21	2.19	0.43
1:A:230:GLU:HA	1:A:230:GLU:OE1	2.19	0.43
1:B:348:LYS:CE	1:B:349:LYS:H	2.27	0.43
1:F:238:ASP:HB3	1:F:239:VAL:H	1.55	0.43
1:F:311:TYR:CD2	1:I:313:MET:HE1	2.54	0.43
1:I:318:MET:O	1:I:319:PRO:O	2.37	0.43
1:B:300:ILE:HG22	1:B:341:MET:CG	2.46	0.42
1:C:17:LEU:HB3	1:C:91:LEU:CD1	2.49	0.42
1:D:184:LEU:HD21	1:D:221:LEU:HD11	2.01	0.42
1:E:125:GLU:HG3	1:E:141:GLU:HB2	2.00	0.42
1:F:348:LYS:HE2	1:F:349:LYS:N	2.23	0.42
1:H:276:LEU:HD12	1:H:276:LEU:HA	1.81	0.42
1:I:83:HIS:CD2	1:I:85:LEU:HB2	2.54	0.42
1:J:237:ARG:NH2	1:J:237:ARG:CB	2.64	0.42
1:B:186:GLU:OE1	1:C:6:LEU:N	2.52	0.42
1:F:263:ASP:OD2	1:G:96:ARG:NE	2.53	0.42
1:G:230:GLU:OE1	1:G:230:GLU:HA	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:51:LEU:N	1:J:52:PRO:HD2	2.34	0.42
1:B:258:THR:HG22	1:B:259:ILE:N	2.34	0.42
1:B:343:VAL:HG12	1:B:343:VAL:O	2.18	0.42
1:F:61:TRP:HZ2	1:F:138:MET:HE1	1.83	0.42
1:F:291:MET:SD	1:I:291:MET:HE1	2.59	0.42
1:D:117:LYS:O	1:D:119:LEU:N	2.48	0.42
1:E:54:ARG:HG3	1:E:80:PHE:CD1	2.54	0.42
1:F:99:VAL:HG13	1:F:108:ILE:HG12	2.01	0.42
1:G:202:ARG:O	1:G:202:ARG:CG	2.67	0.42
1:H:96:ARG:HH11	1:H:227:PRO:HG3	1.84	0.42
1:J:243:ILE:HG13	1:J:246:GLU:HB2	2.02	0.42
1:B:125:GLU:HG3	1:B:141:GLU:HB2	2.01	0.42
1:B:202:ARG:O	1:B:202:ARG:HG3	2.20	0.42
1:B:202:ARG:N	1:B:203:PRO:HD3	2.34	0.42
1:C:200:LEU:O	1:C:201:GLU:HG3	2.19	0.42
1:C:348:LYS:HE2	1:C:349:LYS:N	2.23	0.42
1:D:28:GLU:OE1	1:D:43:LYS:HD3	2.19	0.42
1:D:157:ASN:OD1	1:D:162:ARG:HG3	2.18	0.42
1:F:96:ARG:HH11	1:F:227:PRO:HG3	1.83	0.42
1:H:61:TRP:HE1	1:H:138:MET:HE2	1.85	0.42
1:I:341:MET:O	1:I:344:TYR:HB3	2.20	0.42
1:C:255:TYR:O	1:C:258:THR:HG22	2.19	0.42
1:D:238:ASP:HB3	1:D:239:VAL:H	1.55	0.42
1:F:212:HIS:NE2	1:I:196:GLU:OE1	2.47	0.42
1:G:307:ILE:CD1	1:G:334:MET:HG2	2.43	0.42
1:H:298:ALA:O	1:H:302:MET:HG2	2.19	0.42
1:A:28:GLU:OE1	1:A:43:LYS:HD3	2.20	0.42
1:A:275:LEU:HD12	1:A:275:LEU:HA	1.90	0.42
1:B:96:ARG:HH11	1:B:227:PRO:HG3	1.84	0.42
1:B:348:LYS:CG	1:B:349:LYS:H	2.32	0.42
1:F:311:TYR:HE2	1:F:330:VAL:HG21	1.85	0.42
1:G:300:ILE:HG22	1:G:341:MET:CB	2.50	0.42
1:H:184:LEU:HD21	1:H:221:LEU:HD11	2.02	0.42
1:I:348:LYS:CG	1:I:349:LYS:H	2.31	0.42
1:A:136:VAL:HG11	1:A:173:LEU:HD12	2.01	0.42
1:A:212:HIS:NE2	1:D:196:GLU:OE1	2.47	0.42
1:D:111:LYS:O	1:D:177:LEU:HD21	2.19	0.42
1:H:275:LEU:HD12	1:H:275:LEU:HA	1.89	0.42
1:J:28:GLU:OE1	1:J:43:LYS:HD3	2.20	0.42
1:B:291:MET:HE3	1:C:290:VAL:HG12	2.02	0.42
1:E:148:ASP:O	1:E:152:GLU:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:104:ASN:O	1:H:105:TYR:HB3	2.19	0.42
1:H:309:GLY:C	1:H:311:TYR:H	2.23	0.42
1:I:67:ILE:HG21	1:I:139:PHE:HB3	2.02	0.42
1:I:298:ALA:O	1:I:302:MET:HG2	2.20	0.42
1:J:111:LYS:O	1:J:177:LEU:HD21	2.20	0.42
1:A:255:TYR:CZ	1:A:259:ILE:HD11	2.55	0.42
1:B:238:ASP:HB3	1:B:239:VAL:H	1.51	0.42
1:C:157:ASN:OD1	1:C:162:ARG:HG3	2.20	0.42
1:E:61:TRP:CZ2	1:E:138:MET:HE1	2.51	0.42
1:E:221:LEU:HA	1:E:221:LEU:HD12	1.83	0.42
1:F:104:ASN:O	1:F:105:TYR:HB3	2.20	0.42
1:F:184:LEU:HD21	1:F:221:LEU:HD11	2.01	0.42
1:G:272:VAL:O	1:G:275:LEU:HB2	2.20	0.42
1:A:85:LEU:HD23	1:A:85:LEU:HA	1.94	0.41
1:A:298:ALA:HA	1:D:302:MET:HE2	2.02	0.41
1:F:200:LEU:O	1:F:201:GLU:HG3	2.19	0.41
1:J:276:LEU:HD12	1:J:276:LEU:HA	1.83	0.41
1:A:166:ALA:O	1:A:169:LEU:HB3	2.21	0.41
1:B:152:GLU:HB2	1:B:158:ARG:HH12	1.85	0.41
1:G:313:MET:N	1:G:314:ASN:CB	2.83	0.41
1:I:28:GLU:OE2	1:I:143:ILE:HD11	2.20	0.41
1:J:118:ASN:HD22	1:J:118:ASN:C	2.23	0.41
1:A:148:ASP:O	1:A:152:GLU:HG2	2.20	0.41
1:A:194:VAL:O	1:A:197:GLU:HB2	2.19	0.41
1:C:152:GLU:HB2	1:C:158:ARG:NH1	2.35	0.41
1:D:152:GLU:HB2	1:D:158:ARG:NH1	2.34	0.41
1:D:229:ARG:HA	1:D:258:THR:HG23	2.03	0.41
1:D:229:ARG:CG	1:D:258:THR:HG23	2.50	0.41
1:D:276:LEU:HD12	1:D:276:LEU:HA	1.83	0.41
1:E:238:ASP:O	1:E:239:VAL:HG22	2.20	0.41
1:G:327:TYR:N	1:G:328:PRO:HD2	2.35	0.41
1:H:341:MET:O	1:H:344:TYR:HB3	2.20	0.41
1:J:348:LYS:CG	1:J:349:LYS:H	2.32	0.41
1:A:348:LYS:HE2	1:A:349:LYS:N	2.22	0.41
1:B:171:TYR:OH	1:C:14:PRO:HG3	2.20	0.41
1:B:272:VAL:O	1:B:275:LEU:HB2	2.20	0.41
1:D:54:ARG:HG3	1:D:80:PHE:CD1	2.55	0.41
1:E:348:LYS:CE	1:E:349:LYS:H	2.27	0.41
1:F:132:THR:HG23	1:F:132:THR:O	2.20	0.41
1:F:192:ILE:O	1:F:196:GLU:HG2	2.20	0.41
1:G:255:TYR:CZ	1:G:259:ILE:HD11	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:132:THR:O	1:A:132:THR:HG23	2.20	0.41
1:B:276:LEU:HD12	1:B:276:LEU:HA	1.83	0.41
1:E:24:ARG:HA	1:E:68:HIS:CD2	2.54	0.41
1:H:300:ILE:HG13	1:H:301:PHE:N	2.36	0.41
1:I:132:THR:O	1:I:132:THR:HG23	2.20	0.41
1:B:28:GLU:OE1	1:B:43:LYS:HD3	2.20	0.41
1:B:242:LEU:O	1:B:243:ILE:C	2.59	0.41
1:B:244:GLU:C	1:B:246:GLU:N	2.73	0.41
1:C:83:HIS:ND1	1:C:84:PRO:CD	2.76	0.41
1:E:229:ARG:CG	1:E:258:THR:HG23	2.51	0.41
1:E:292:LYS:HZ3	1:E:348:LYS:HE3	1.85	0.41
1:F:348:LYS:CG	1:F:349:LYS:H	2.33	0.41
1:B:104:ASN:O	1:B:105:TYR:HB3	2.21	0.41
1:C:202:ARG:N	1:C:203:PRO:HD3	2.36	0.41
1:C:229:ARG:HA	1:C:258:THR:HG21	2.02	0.41
1:C:291:MET:HB3	1:E:290:VAL:CG1	2.50	0.41
1:C:300:ILE:HG22	1:C:341:MET:CG	2.49	0.41
1:F:33:ASN:HB2	1:F:60:THR:HG23	2.02	0.41
1:F:120:HIS:HD2	1:F:191:GLU:OE2	2.03	0.41
1:F:202:ARG:O	1:F:202:ARG:CG	2.68	0.41
1:B:218:LEU:HD12	1:B:218:LEU:HA	1.97	0.41
1:C:73:VAL:HG21	1:C:91:LEU:HD21	2.03	0.41
1:C:116:ASP:OD2	1:C:119:LEU:HB3	2.21	0.41
1:E:117:LYS:O	1:E:119:LEU:N	2.51	0.41
1:E:202:ARG:O	1:E:202:ARG:CG	2.69	0.41
1:F:170:LEU:O	1:F:171:TYR:C	2.58	0.41
1:G:343:VAL:HG12	1:G:343:VAL:O	2.20	0.41
1:I:348:LYS:HE2	1:I:349:LYS:N	2.25	0.41
1:A:6:LEU:HD22	1:A:7:SER:H	1.85	0.41
1:B:307:ILE:CD1	1:B:334:MET:HG2	2.37	0.41
1:C:10:LYS:H	1:C:10:LYS:HD2	1.86	0.41
1:F:275:LEU:HD12	1:F:275:LEU:HA	1.90	0.41
1:G:221:LEU:HD12	1:G:221:LEU:HA	1.80	0.41
1:H:118:ASN:ND2	1:H:119:LEU:N	2.69	0.41
1:I:202:ARG:N	1:I:203:PRO:HD3	2.35	0.41
1:I:309:GLY:C	1:I:311:TYR:H	2.23	0.41
1:I:327:TYR:CE2	1:J:315:PHE:O	2.74	0.41
1:E:275:LEU:HD12	1:E:275:LEU:HA	1.93	0.41
1:F:118:ASN:HD22	1:F:118:ASN:C	2.24	0.41
1:F:216:ARG:HD2	1:I:196:GLU:OE1	2.21	0.40
1:G:281:SER:OG	1:H:280:LEU:HD13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:113:PHE:CD1	1:H:124:SER:HB3	2.56	0.40
1:I:302:MET:HG2	1:J:302:MET:HE1	2.03	0.40
1:J:61:TRP:CD1	1:J:61:TRP:C	2.93	0.40
1:B:117:LYS:O	1:B:119:LEU:N	2.54	0.40
1:C:272:VAL:O	1:C:275:LEU:HB2	2.20	0.40
1:D:118:ASN:ND2	1:D:119:LEU:N	2.70	0.40
1:E:286:LYS:C	1:E:288:ASN:N	2.75	0.40
1:F:319:PRO:C	1:F:321:LEU:O	2.59	0.40
1:G:118:ASN:HD22	1:G:119:LEU:N	2.19	0.40
1:I:318:MET:HA	1:I:319:PRO:HD2	1.82	0.40
1:I:319:PRO:CB	1:I:320:GLU:HA	2.48	0.40
1:A:242:LEU:O	1:A:243:ILE:C	2.59	0.40
1:B:86:VAL:HG13	1:B:107:PHE:CD2	2.57	0.40
1:C:24:ARG:HA	1:C:68:HIS:CD2	2.56	0.40
1:C:41:GLU:HG3	1:C:41:GLU:O	2.21	0.40
1:C:82:ILE:HD13	1:C:130:ILE:HD13	2.03	0.40
1:C:237:ARG:HH21	1:C:237:ARG:HB3	1.85	0.40
1:C:255:TYR:CZ	1:C:259:ILE:HD11	2.56	0.40
1:D:221:LEU:HA	1:D:221:LEU:HD12	1.78	0.40
1:E:17:LEU:H	1:E:17:LEU:HD22	1.86	0.40
1:F:168:TYR:OH	1:G:14:PRO:HG2	2.21	0.40
1:G:19:TYR:CZ	1:G:21:GLY:CA	2.97	0.40
1:H:313:MET:CA	1:J:311:TYR:HB2	2.49	0.40
1:I:200:LEU:O	1:I:201:GLU:HG3	2.21	0.40
1:I:326:GLY:O	1:I:329:VAL:HB	2.20	0.40
1:A:221:LEU:HD12	1:A:221:LEU:HA	1.74	0.40
1:A:294:LEU:HD11	1:D:294:LEU:HD22	2.03	0.40
1:C:276:LEU:HD12	1:C:276:LEU:HA	1.86	0.40
1:E:311:TYR:HE2	1:E:330:VAL:HG21	1.86	0.40
1:G:181:TYR:HB2	1:G:261:ILE:HD13	2.04	0.40
1:H:17:LEU:HD22	1:H:17:LEU:N	2.37	0.40
1:I:118:ASN:ND2	1:I:119:LEU:N	2.68	0.40
1:I:258:THR:HG22	1:I:259:ILE:N	2.37	0.40
1:C:61:TRP:CD1	1:C:61:TRP:C	2.95	0.40
1:C:238:ASP:C	1:C:239:VAL:HG13	2.41	0.40
1:F:111:LYS:O	1:F:177:LEU:HD21	2.22	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:37:GLU:OE2	1:E:348:LYS:CA[2_555]	1.99	0.21
1:F:78:GLU:OE1	1:H:202:ARG:NH1[2_546]	2.00	0.20
1:D:38:GLU:OE1	1:H:75:ARG:CD[2_546]	2.05	0.15
1:C:37:GLU:OE2	1:E:348:LYS:N[2_555]	2.11	0.09
1:F:348:LYS:CA	1:I:37:GLU:OE2[2_556]	2.14	0.06

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	327/363 (90%)	284 (87%)	32 (10%)	11 (3%)	3	15
1	B	327/363 (90%)	291 (89%)	28 (9%)	8 (2%)	6	22
1	C	327/363 (90%)	289 (88%)	29 (9%)	9 (3%)	5	19
1	D	327/363 (90%)	289 (88%)	26 (8%)	12 (4%)	3	13
1	E	327/363 (90%)	289 (88%)	25 (8%)	13 (4%)	3	11
1	F	338/363 (93%)	293 (87%)	34 (10%)	11 (3%)	4	15
1	G	338/363 (93%)	292 (86%)	32 (10%)	14 (4%)	3	11
1	H	334/363 (92%)	291 (87%)	32 (10%)	11 (3%)	4	15
1	I	336/363 (93%)	289 (86%)	33 (10%)	14 (4%)	3	10
1	J	332/363 (92%)	291 (88%)	29 (9%)	12 (4%)	3	14
All	All	3313/3630 (91%)	2898 (88%)	300 (9%)	115 (4%)	3	14

All (115) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	240	PRO
1	A	244	GLU
1	A	245	LYS
1	A	348	LYS
1	B	7	SER

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Mol	Chain	Res	Type
1	B	240	PRO
1	B	244	GLU
1	B	245	LYS
1	B	348	LYS
1	C	240	PRO
1	C	244	GLU
1	C	245	LYS
1	C	348	LYS
1	D	240	PRO
1	D	244	GLU
1	D	245	LYS
1	D	348	LYS
1	E	6	LEU
1	E	240	PRO
1	E	244	GLU
1	E	245	LYS
1	E	348	LYS
1	F	7	SER
1	F	240	PRO
1	F	244	GLU
1	F	245	LYS
1	F	348	LYS
1	G	240	PRO
1	G	244	GLU
1	G	245	LYS
1	G	325	TRP
1	G	348	LYS
1	H	240	PRO
1	H	244	GLU
1	H	245	LYS
1	H	322	ARG
1	H	324	LYS
1	H	348	LYS
1	I	240	PRO
1	I	244	GLU
1	I	245	LYS
1	I	319	PRO
1	I	324	LYS
1	I	348	LYS
1	J	240	PRO
1	J	244	GLU
1	J	245	LYS

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Mol	Chain	Res	Type
1	J	348	LYS
1	A	7	SER
1	A	238	ASP
1	D	238	ASP
1	E	7	SER
1	E	25	GLU
1	E	238	ASP
1	E	287	THR
1	G	7	SER
1	G	238	ASP
1	G	313	MET
1	G	317	TYR
1	H	238	ASP
1	I	238	ASP
1	I	323	TRP
1	B	238	ASP
1	C	25	GLU
1	C	238	ASP
1	D	25	GLU
1	D	287	THR
1	F	25	GLU
1	F	118	ASN
1	F	238	ASP
1	I	320	GLU
1	J	238	ASP
1	J	314	ASN
1	J	327	TYR
1	A	25	GLU
1	A	239	VAL
1	B	25	GLU
1	B	239	VAL
1	C	239	VAL
1	D	239	VAL
1	E	95	GLN
1	E	239	VAL
1	F	239	VAL
1	F	344	TYR
1	G	239	VAL
1	G	315	PHE
1	H	118	ASN
1	H	239	VAL
1	I	25	GLU

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Mol	Chain	Res	Type
1	I	239	VAL
1	J	25	GLU
1	J	118	ASN
1	J	239	VAL
1	J	312	GLY
1	A	202	ARG
1	A	344	TYR
1	C	327	TYR
1	D	202	ARG
1	D	344	TYR
1	E	202	ARG
1	E	344	TYR
1	G	25	GLU
1	G	202	ARG
1	H	202	ARG
1	H	344	TYR
1	J	344	TYR
1	A	118	ASN
1	C	344	TYR
1	D	118	ASN
1	F	202	ARG
1	G	312	GLY
1	I	344	TYR
1	I	243	ILE
1	D	243	ILE
1	I	202	ARG

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	311/341 (91%)	278 (89%)	33 (11%)	6	20
1	B	309/341 (91%)	272 (88%)	37 (12%)	5	15
1	C	309/341 (91%)	275 (89%)	34 (11%)	6	19
1	D	310/341 (91%)	278 (90%)	32 (10%)	7	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	310/341 (91%)	275 (89%)	35 (11%)	6	18
1	F	312/341 (92%)	277 (89%)	35 (11%)	6	18
1	G	311/341 (91%)	278 (89%)	33 (11%)	6	20
1	H	311/341 (91%)	275 (88%)	36 (12%)	5	16
1	I	311/341 (91%)	279 (90%)	32 (10%)	7	22
1	J	312/341 (92%)	274 (88%)	38 (12%)	5	15
All	All	3106/3410 (91%)	2761 (89%)	345 (11%)	6	19

All (345) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	LEU
1	A	7	SER
1	A	10	LYS
1	A	17	LEU
1	A	22	LYS
1	A	39	PHE
1	A	40	ARG
1	A	56	SER
1	A	60	THR
1	A	95	GLN
1	A	96	ARG
1	A	118	ASN
1	A	121	GLU
1	A	122	LEU
1	A	123	GLU
1	A	143	ILE
1	A	152	GLU
1	A	165	ARG
1	A	202	ARG
1	A	206	GLU
1	A	218	LEU
1	A	222	ARG
1	A	232	LEU
1	A	235	LEU
1	A	237	ARG
1	A	238	ASP
1	A	239	VAL
1	A	258	THR
1	A	267	THR

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Mol	Chain	Res	Type
1	A	275	LEU
1	A	288	ASN
1	A	327	TYR
1	A	346	LYS
1	B	10	LYS
1	B	17	LEU
1	B	22	LYS
1	B	28	GLU
1	B	39	PHE
1	B	40	ARG
1	B	56	SER
1	B	60	THR
1	B	95	GLN
1	B	96	ARG
1	B	118	ASN
1	B	121	GLU
1	B	122	LEU
1	B	123	GLU
1	B	143	ILE
1	B	152	GLU
1	B	165	ARG
1	B	202	ARG
1	B	206	GLU
1	B	207	THR
1	B	218	LEU
1	B	222	ARG
1	B	232	LEU
1	B	234	SER
1	B	235	LEU
1	B	237	ARG
1	B	238	ASP
1	B	239	VAL
1	B	258	THR
1	B	260	GLN
1	B	275	LEU
1	B	283	VAL
1	B	288	ASN
1	B	297	ILE
1	B	327	TYR
1	B	346	LYS
1	B	349	LYS
1	C	10	LYS

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Mol	Chain	Res	Type
1	C	17	LEU
1	C	22	LYS
1	C	28	GLU
1	C	39	PHE
1	C	40	ARG
1	C	60	THR
1	C	95	GLN
1	C	96	ARG
1	C	118	ASN
1	C	121	GLU
1	C	122	LEU
1	C	123	GLU
1	C	143	ILE
1	C	152	GLU
1	C	165	ARG
1	C	202	ARG
1	C	206	GLU
1	C	207	THR
1	C	218	LEU
1	C	222	ARG
1	C	232	LEU
1	C	234	SER
1	C	235	LEU
1	C	238	ASP
1	C	239	VAL
1	C	258	THR
1	C	260	GLN
1	C	267	THR
1	C	275	LEU
1	C	288	ASN
1	C	330	VAL
1	C	346	LYS
1	C	349	LYS
1	D	6	LEU
1	D	7	SER
1	D	10	LYS
1	D	17	LEU
1	D	22	LYS
1	D	39	PHE
1	D	40	ARG
1	D	60	THR
1	D	95	GLN

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Mol	Chain	Res	Type
1	D	96	ARG
1	D	118	ASN
1	D	121	GLU
1	D	122	LEU
1	D	123	GLU
1	D	143	ILE
1	D	152	GLU
1	D	165	ARG
1	D	202	ARG
1	D	206	GLU
1	D	207	THR
1	D	218	LEU
1	D	222	ARG
1	D	232	LEU
1	D	234	SER
1	D	235	LEU
1	D	238	ASP
1	D	239	VAL
1	D	249	PRO
1	D	258	THR
1	D	275	LEU
1	D	288	ASN
1	D	346	LYS
1	E	7	SER
1	E	10	LYS
1	E	17	LEU
1	E	22	LYS
1	E	39	PHE
1	E	40	ARG
1	E	56	SER
1	E	60	THR
1	E	95	GLN
1	E	96	ARG
1	E	118	ASN
1	E	121	GLU
1	E	122	LEU
1	E	123	GLU
1	E	143	ILE
1	E	152	GLU
1	E	165	ARG
1	E	200	LEU
1	E	202	ARG

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Mol	Chain	Res	Type
1	E	206	GLU
1	E	218	LEU
1	E	222	ARG
1	E	232	LEU
1	E	235	LEU
1	E	238	ASP
1	E	239	VAL
1	E	258	THR
1	E	260	GLN
1	E	275	LEU
1	E	277	ASP
1	E	288	ASN
1	E	297	ILE
1	E	327	TYR
1	E	346	LYS
1	E	349	LYS
1	F	6	LEU
1	F	10	LYS
1	F	17	LEU
1	F	22	LYS
1	F	28	GLU
1	F	39	PHE
1	F	40	ARG
1	F	56	SER
1	F	95	GLN
1	F	96	ARG
1	F	118	ASN
1	F	121	GLU
1	F	122	LEU
1	F	123	GLU
1	F	143	ILE
1	F	152	GLU
1	F	165	ARG
1	F	200	LEU
1	F	202	ARG
1	F	206	GLU
1	F	218	LEU
1	F	222	ARG
1	F	232	LEU
1	F	234	SER
1	F	235	LEU
1	F	238	ASP

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Mol	Chain	Res	Type
1	F	239	VAL
1	F	258	THR
1	F	275	LEU
1	F	277	ASP
1	F	288	ASN
1	F	297	ILE
1	F	327	TYR
1	F	346	LYS
1	F	349	LYS
1	G	10	LYS
1	G	17	LEU
1	G	22	LYS
1	G	39	PHE
1	G	40	ARG
1	G	56	SER
1	G	95	GLN
1	G	96	ARG
1	G	118	ASN
1	G	121	GLU
1	G	122	LEU
1	G	123	GLU
1	G	143	ILE
1	G	152	GLU
1	G	165	ARG
1	G	202	ARG
1	G	206	GLU
1	G	207	THR
1	G	215	LYS
1	G	218	LEU
1	G	222	ARG
1	G	232	LEU
1	G	234	SER
1	G	235	LEU
1	G	238	ASP
1	G	239	VAL
1	G	258	THR
1	G	275	LEU
1	G	287	THR
1	G	288	ASN
1	G	327	TYR
1	G	346	LYS
1	G	349	LYS

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Mol	Chain	Res	Type
1	H	7	SER
1	H	10	LYS
1	H	17	LEU
1	H	22	LYS
1	H	39	PHE
1	H	40	ARG
1	H	56	SER
1	H	71	ASP
1	H	95	GLN
1	H	96	ARG
1	H	118	ASN
1	H	121	GLU
1	H	122	LEU
1	H	123	GLU
1	H	143	ILE
1	H	152	GLU
1	H	165	ARG
1	H	202	ARG
1	H	206	GLU
1	H	207	THR
1	H	218	LEU
1	H	222	ARG
1	H	232	LEU
1	H	234	SER
1	H	235	LEU
1	H	238	ASP
1	H	239	VAL
1	H	258	THR
1	H	260	GLN
1	H	275	LEU
1	H	283	VAL
1	H	287	THR
1	H	288	ASN
1	H	297	ILE
1	H	327	TYR
1	H	346	LYS
1	I	10	LYS
1	I	17	LEU
1	I	22	LYS
1	I	39	PHE
1	I	40	ARG
1	I	60	THR

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Mol	Chain	Res	Type
1	I	95	GLN
1	I	96	ARG
1	I	118	ASN
1	I	121	GLU
1	I	122	LEU
1	I	123	GLU
1	I	143	ILE
1	I	152	GLU
1	I	165	ARG
1	I	200	LEU
1	I	202	ARG
1	I	206	GLU
1	I	207	THR
1	I	218	LEU
1	I	222	ARG
1	I	232	LEU
1	I	235	LEU
1	I	238	ASP
1	I	239	VAL
1	I	258	THR
1	I	267	THR
1	I	275	LEU
1	I	283	VAL
1	I	288	ASN
1	I	327	TYR
1	I	346	LYS
1	J	6	LEU
1	J	7	SER
1	J	10	LYS
1	J	22	LYS
1	J	28	GLU
1	J	39	PHE
1	J	40	ARG
1	J	56	SER
1	J	60	THR
1	J	67	ILE
1	J	95	GLN
1	J	96	ARG
1	J	118	ASN
1	J	121	GLU
1	J	122	LEU
1	J	123	GLU

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Mol	Chain	Res	Type
1	J	143	ILE
1	J	152	GLU
1	J	165	ARG
1	J	202	ARG
1	J	206	GLU
1	J	207	THR
1	J	218	LEU
1	J	222	ARG
1	J	232	LEU
1	J	234	SER
1	J	235	LEU
1	J	238	ASP
1	J	239	VAL
1	J	258	THR
1	J	260	GLN
1	J	267	THR
1	J	269	ARG
1	J	275	LEU
1	J	288	ASN
1	J	327	TYR
1	J	346	LYS
1	J	349	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (31) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	118	ASN
1	A	120	HIS
1	A	217	ASN
1	B	118	ASN
1	B	120	HIS
1	B	217	ASN
1	C	118	ASN
1	C	120	HIS
1	C	217	ASN
1	D	118	ASN
1	D	120	HIS
1	D	217	ASN
1	E	118	ASN
1	E	120	HIS
1	E	217	ASN
1	E	260	GLN

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Mol	Chain	Res	Type
1	F	118	ASN
1	F	120	HIS
1	F	217	ASN
1	G	118	ASN
1	G	120	HIS
1	G	217	ASN
1	H	118	ASN
1	H	120	HIS
1	H	217	ASN
1	I	118	ASN
1	I	120	HIS
1	I	217	ASN
1	J	118	ASN
1	J	120	HIS
1	J	217	ASN

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](#)

Of 28 ligands modelled in this entry, 28 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	331/363 (91%)	0.07	13 (3%) 39 35	43, 68, 98, 103	0
1	B	331/363 (91%)	0.17	14 (4%) 36 32	43, 68, 98, 103	0
1	C	331/363 (91%)	0.21	15 (4%) 33 29	43, 68, 98, 103	0
1	D	331/363 (91%)	0.19	12 (3%) 42 37	43, 68, 98, 103	0
1	E	331/363 (91%)	0.13	5 (1%) 73 73	43, 68, 98, 103	0
1	F	342/363 (94%)	0.14	10 (2%) 51 47	43, 69, 98, 103	0
1	G	342/363 (94%)	0.17	12 (3%) 44 38	43, 69, 98, 103	0
1	H	338/363 (93%)	0.19	13 (3%) 40 36	43, 68, 98, 103	0
1	I	340/363 (93%)	0.09	7 (2%) 63 61	43, 69, 98, 103	0
1	J	336/363 (92%)	0.17	11 (3%) 46 41	43, 68, 98, 103	0
All	All	3353/3630 (92%)	0.15	112 (3%) 46 41	43, 68, 98, 103	0

All (112) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	I	245	LYS	6.5
1	H	282	SER	6.1
1	D	343	VAL	5.0
1	H	343	VAL	4.9
1	B	329	VAL	4.7
1	F	245	LYS	4.5
1	C	343	VAL	4.4
1	F	339	VAL	4.2
1	I	345	PHE	4.2
1	C	332	ALA	4.2
1	F	205	LYS	3.9
1	C	328	PRO	3.9
1	B	238	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
1	D	205	LYS	3.7
1	D	245	LYS	3.5
1	G	345	PHE	3.5
1	A	245	LYS	3.4
1	I	342	VAL	3.3
1	D	342	VAL	3.3
1	C	329	VAL	3.3
1	A	327	TYR	3.2
1	H	336	VAL	3.2
1	C	245	LYS	3.2
1	E	245	LYS	3.0
1	I	344	TYR	3.0
1	J	328	PRO	3.0
1	J	325	TRP	3.0
1	B	330	VAL	3.0
1	C	339	VAL	3.0
1	G	10	LYS	2.9
1	B	202	ARG	2.9
1	G	200	LEU	2.9
1	B	245	LYS	2.9
1	G	343	VAL	2.9
1	J	202	ARG	2.9
1	A	347	LYS	2.8
1	A	340	ILE	2.8
1	D	5	ARG	2.8
1	H	285	ASN	2.8
1	J	37	GLU	2.8
1	C	345	PHE	2.7
1	J	347	LYS	2.7
1	G	118	ASN	2.7
1	H	283	VAL	2.7
1	C	205	LYS	2.7
1	J	315	PHE	2.7
1	B	340	ILE	2.7
1	B	328	PRO	2.7
1	G	342	VAL	2.6
1	H	236	TYR	2.6
1	A	343	VAL	2.6
1	E	110	LEU	2.6
1	D	346	LYS	2.6
1	H	245	LYS	2.6
1	A	128	SER	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	136	VAL	2.6
1	D	36	ILE	2.6
1	C	344	TYR	2.6
1	J	342	VAL	2.5
1	G	314	ASN	2.5
1	E	129	LEU	2.5
1	F	342	VAL	2.5
1	I	205	LYS	2.5
1	D	330	VAL	2.5
1	J	16	THR	2.5
1	G	312	GLY	2.5
1	I	343	VAL	2.5
1	H	226	TRP	2.5
1	D	345	PHE	2.4
1	B	343	VAL	2.4
1	C	342	VAL	2.4
1	B	346	LYS	2.4
1	A	336	VAL	2.4
1	A	333	VAL	2.4
1	H	205	LYS	2.4
1	F	25	GLU	2.4
1	A	332	ALA	2.4
1	E	128	SER	2.4
1	F	108	ILE	2.4
1	F	199	VAL	2.3
1	A	26	ASP	2.3
1	B	37	GLU	2.3
1	G	245	LYS	2.3
1	F	36	ILE	2.3
1	J	119	LEU	2.3
1	F	349	LYS	2.3
1	I	203	PRO	2.3
1	G	313	MET	2.3
1	H	346	LYS	2.3
1	A	138	MET	2.2
1	A	205	LYS	2.2
1	C	346	LYS	2.2
1	J	340	ILE	2.2
1	C	203	PRO	2.2
1	E	118	ASN	2.2
1	F	110	LEU	2.2
1	H	313	MET	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	246	GLU	2.2
1	D	344	TYR	2.2
1	G	349	LYS	2.2
1	C	128	SER	2.2
1	B	344	TYR	2.2
1	D	26	ASP	2.1
1	H	325	TRP	2.1
1	C	244	GLU	2.1
1	D	331	LEU	2.1
1	G	347	LYS	2.1
1	J	346	LYS	2.1
1	B	248	VAL	2.1
1	H	25	GLU	2.1
1	B	21	GLY	2.0
1	C	298	ALA	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](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	MG	D	1353	1/1	0.79	0.30	65,65,65,65	0
3	MG	F	1350	1/1	0.81	0.26	55,55,55,55	0
3	MG	F	1352	1/1	0.81	0.39	46,46,46,46	0
3	MG	D	1352	1/1	0.84	0.38	71,71,71,71	0
3	MG	C	1350	1/1	0.88	0.24	43,43,43,43	0
3	MG	D	1356	1/1	0.91	0.33	46,46,46,46	0
3	MG	G	1353	1/1	0.91	0.18	43,43,43,43	0
2	CL	B	1350	1/1	0.92	0.10	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	MG	J	1350	1/1	0.92	0.40	61,61,61,61	0
3	MG	J	1351	1/1	0.92	0.30	43,43,43,43	0
3	MG	J	1352	1/1	0.92	0.61	63,63,63,63	0
3	MG	D	1355	1/1	0.93	0.25	56,56,56,56	0
3	MG	C	1351	1/1	0.94	0.29	38,38,38,38	0
3	MG	F	1353	1/1	0.94	0.28	45,45,45,45	0
2	CL	F	1351	1/1	0.94	0.15	61,61,61,61	0
3	MG	B	1351	1/1	0.95	0.54	56,56,56,56	0
2	CL	D	1351	1/1	0.95	0.08	59,59,59,59	0
3	MG	A	1352	1/1	0.96	0.18	35,35,35,35	0
2	CL	G	1351	1/1	0.96	0.14	69,69,69,69	0
3	MG	G	1354	1/1	0.96	0.52	50,50,50,50	0
2	CL	G	1350	1/1	0.97	0.08	47,47,47,47	0
3	MG	H	1350	1/1	0.97	0.62	54,54,54,54	0
3	MG	A	1351	1/1	0.97	0.31	47,47,47,47	0
3	MG	G	1352	1/1	0.97	0.31	44,44,44,44	0
3	MG	D	1354	1/1	0.97	0.69	55,55,55,55	0
2	CL	D	1350	1/1	0.98	0.14	42,42,42,42	0
3	MG	E	1350	1/1	0.98	0.57	56,56,56,56	0
2	CL	A	1350	1/1	0.98	0.06	50,50,50,50	0

6.5 Other polymers [i](#)

There are no such residues in this entry.