



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 12, 2024 – 09:07 PM EDT

PDB ID : 3HIF
Title : The crystal structure of apo wild type CAP at 3.6 Å resolution.
Authors : Steitz, T.A.; Sharma, H.; Wang, J.; Kong, J.; Yu, S.
Deposited on : 2009-05-19
Resolution : 3.59 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) : 1.20.1
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

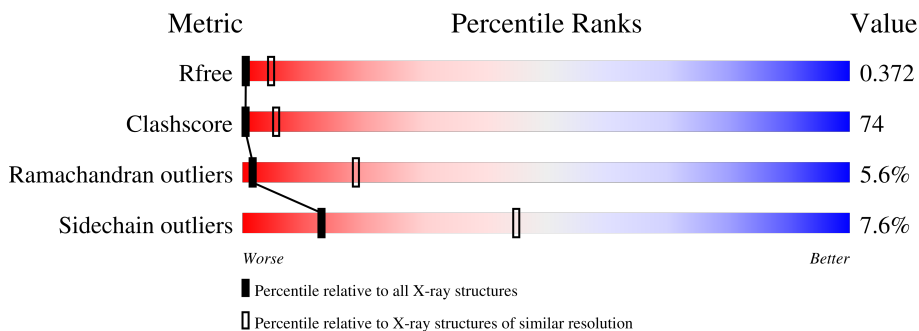
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.59 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	1257 (3.70-3.50)
Clashscore	141614	1353 (3.70-3.50)
Ramachandran outliers	138981	1307 (3.70-3.50)
Sidechain outliers	138945	1307 (3.70-3.50)

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 $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	A	210	43% 39% 9% • 5%
1	B	210	45% 35% 12% • 5%
1	C	210	40% 40% 11% • 5%
1	D	210	53% 33% 8% • 5%
1	E	210	38% 44% 10% • 5%
1	F	210	36% 41% 12% 5% 5%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 9456 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 Catabolite gene activator.

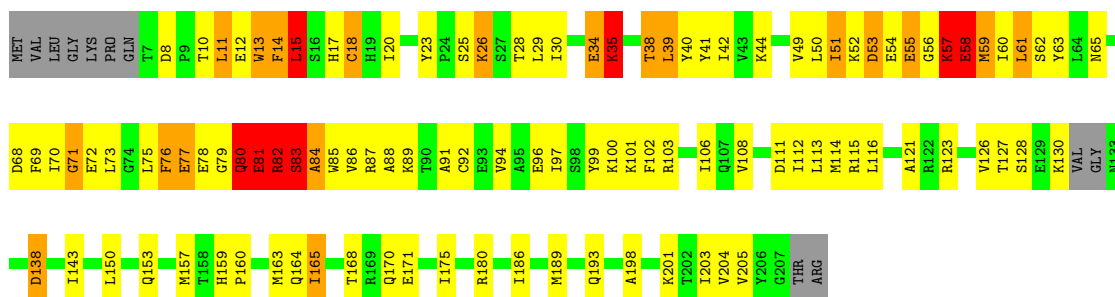
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	199	1576	998	275	294	9	0	0	0
1	B	199	1576	998	275	294	9	0	0	0
1	C	199	1576	998	275	294	9	0	0	0
1	D	199	1576	998	275	294	9	0	0	0
1	E	199	1576	998	275	294	9	0	0	0
1	F	199	1576	998	275	294	9	0	0	0

3 Residue-property plots [i](#)

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

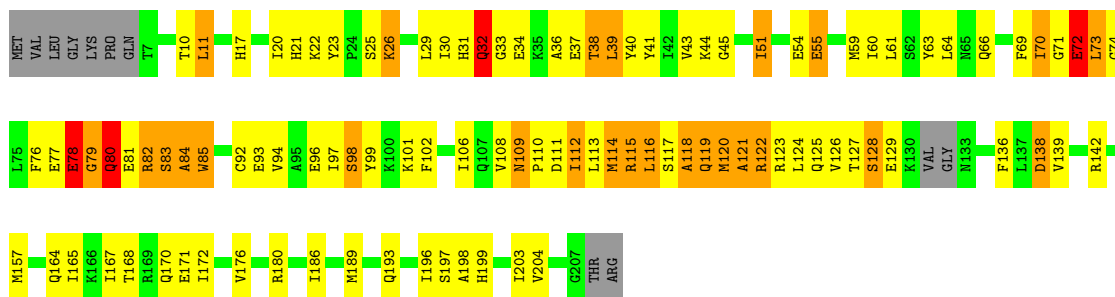
- Molecule 1: Catabolite gene activator

Chain A: 



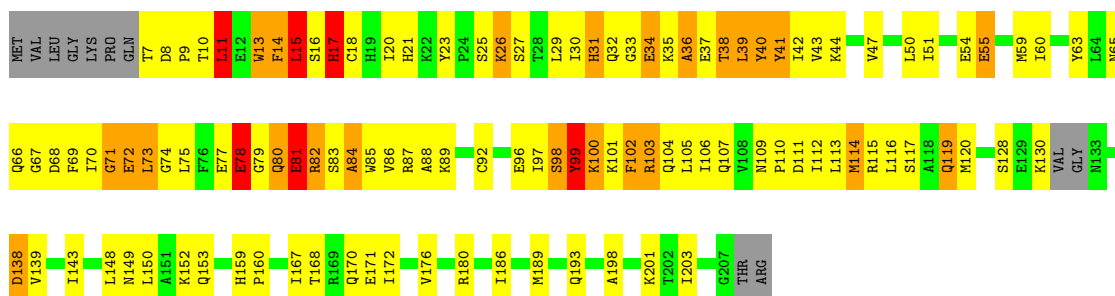
- Molecule 1: Catabolite gene activator

Chain B: 



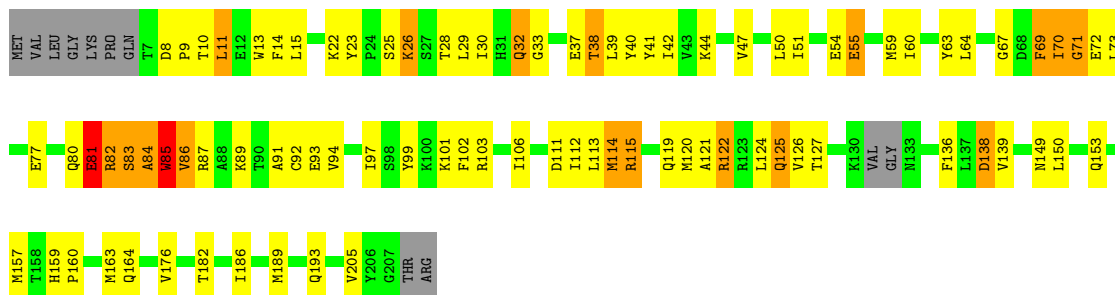
- Molecule 1: Catabolite gene activator

Chain C: 



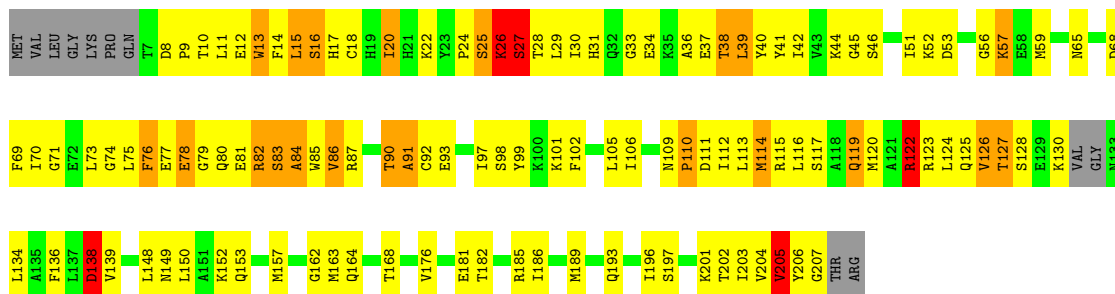
- Molecule 1: Catabolite gene activator

Chain D:  53% 33% 8% • 5%

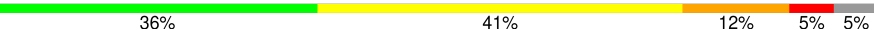


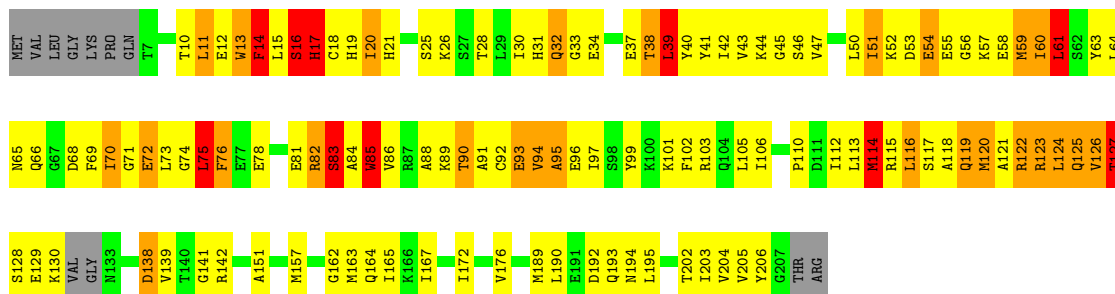
- Molecule 1: Catabolite gene activator

Chain E:  38% 44% 10% • 5%



- Molecule 1: Catabolite gene activator

Chain F:  36% 41% 12% 5% 5%



4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	125.29Å 125.29Å 224.68Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	48.06 – 3.59 48.05 – 3.59	Depositor EDS
% Data completeness (in resolution range)	98.9 (48.06-3.59) 98.9 (48.05-3.59)	Depositor EDS
R_{merge}	0.46	Depositor
R_{sym}	0.53	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.27 (at 3.57Å)	Xtrriage
Refinement program	REFMAC 5.4.0077	Depositor
R, R_{free}	0.295 , 0.318 0.362 , 0.372	Depositor DCC
R_{free} test set	1232 reflections (5.10%)	wwPDB-VP
Wilson B-factor (Å ²)	100.5	Xtrriage
Anisotropy	0.139	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , -10.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	0.043 for -h,-k,l	Xtrriage
F_o, F_c correlation	0.83	EDS
Total number of atoms	9456	wwPDB-VP
Average B, all atoms (Å ²)	29.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.02% 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	0.54	3/1600 (0.2%)	1.07	19/2154 (0.9%)
1	B	0.71	3/1600 (0.2%)	0.82	11/2154 (0.5%)
1	C	0.65	3/1600 (0.2%)	1.72	23/2154 (1.1%)
1	D	0.54	3/1600 (0.2%)	0.81	13/2154 (0.6%)
1	E	0.51	2/1600 (0.1%)	1.05	16/2154 (0.7%)
1	F	0.54	3/1600 (0.2%)	1.12	28/2154 (1.3%)
All	All	0.59	17/9600 (0.2%)	1.14	110/12924 (0.9%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	1
1	C	1	3
1	D	0	2
1	E	0	1
1	F	0	2
All	All	1	11

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	112	ILE	CG1-CD1	20.25	2.90	1.50
1	C	78	GLU	C-N	-14.81	1.06	1.33
1	C	138	ASP	CG-OD1	11.91	1.52	1.25
1	A	138	ASP	CG-OD1	11.88	1.52	1.25
1	F	138	ASP	CG-OD1	11.88	1.52	1.25
1	D	138	ASP	CG-OD1	11.86	1.52	1.25
1	B	138	ASP	CG-OD1	11.83	1.52	1.25
1	E	138	ASP	CG-OD1	11.83	1.52	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	138	ASP	CG-OD2	11.81	1.52	1.25
1	F	138	ASP	CG-OD2	11.79	1.52	1.25
1	A	138	ASP	CG-OD2	11.77	1.52	1.25
1	D	138	ASP	CG-OD2	11.75	1.52	1.25
1	E	138	ASP	CG-OD2	11.72	1.52	1.25
1	B	138	ASP	CG-OD2	11.72	1.52	1.25
1	D	85	TRP	C-N	-9.72	1.11	1.34
1	A	58	GLU	C-N	-8.85	1.13	1.34
1	F	76	PHE	C-N	-5.30	1.21	1.34

All (110) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	82	ARG	N-CA-CB	-40.78	37.20	110.60
1	C	81	GLU	CB-CA-C	-29.48	51.45	110.40
1	C	78	GLU	C-N-CA	26.64	178.25	122.30
1	C	102	PHE	CB-CA-C	-19.82	70.76	110.40
1	E	82	ARG	CB-CA-C	-19.36	71.67	110.40
1	C	81	GLU	N-CA-C	18.05	159.73	111.00
1	C	78	GLU	O-C-N	-17.33	93.75	123.20
1	A	35	LYS	N-CA-CB	16.43	140.17	110.60
1	C	13	TRP	CB-CA-C	-16.13	78.13	110.40
1	E	83	SER	N-CA-CB	-16.10	86.36	110.50
1	A	80	GLN	CB-CA-C	-16.08	78.25	110.40
1	A	59	MET	N-CA-CB	-15.65	82.42	110.60
1	F	12	GLU	CB-CA-C	-15.31	79.78	110.40
1	C	99	TYR	CB-CA-C	-15.23	79.93	110.40
1	F	127	THR	CB-CA-C	-14.78	71.69	111.60
1	B	32	GLN	N-CA-C	14.12	149.13	111.00
1	A	58	GLU	O-C-N	-13.77	100.67	122.70
1	F	120	MET	N-CA-CB	-12.77	87.61	110.60
1	E	122	ARG	CB-CA-C	-12.73	84.94	110.40
1	A	34	GLU	N-CA-C	12.40	144.48	111.00
1	E	26	LYS	CB-CA-C	-12.26	85.88	110.40
1	E	13	TRP	CB-CA-C	-12.22	85.95	110.40
1	A	80	GLN	N-CA-C	12.19	143.91	111.00
1	D	85	TRP	N-CA-C	-12.09	78.35	111.00
1	D	85	TRP	O-C-N	-11.55	104.21	122.70
1	C	78	GLU	CA-C-N	11.45	139.10	116.20
1	E	27	SER	N-CA-C	-11.31	80.47	111.00
1	C	78	GLU	CB-CA-C	-11.07	88.25	110.40
1	F	59	MET	CB-CA-C	10.42	131.25	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	16	SER	CB-CA-C	10.41	129.89	110.10
1	F	32	GLN	N-CA-C	10.22	138.59	111.00
1	B	32	GLN	CB-CA-C	-9.88	90.64	110.40
1	F	17	HIS	N-CA-CB	-9.71	93.11	110.60
1	B	55	GLU	CB-CA-C	-9.54	91.31	110.40
1	E	126	VAL	CB-CA-C	-9.53	93.30	111.40
1	C	79	GLY	N-CA-C	9.50	136.86	113.10
1	C	11	LEU	CB-CA-C	-9.47	92.20	110.20
1	D	69	PHE	CB-CA-C	-9.28	91.84	110.40
1	A	58	GLU	CB-CA-C	-9.12	92.17	110.40
1	D	138	ASP	CB-CG-OD1	-9.02	110.18	118.30
1	E	138	ASP	CB-CG-OD1	-8.80	110.38	118.30
1	F	138	ASP	CB-CG-OD1	-8.80	110.38	118.30
1	E	127	THR	N-CA-CB	-8.71	93.75	110.30
1	F	34	GLU	CB-CA-C	-8.66	93.08	110.40
1	C	138	ASP	CB-CG-OD1	-8.61	110.55	118.30
1	D	55	GLU	CB-CA-C	-8.59	93.23	110.40
1	A	138	ASP	CB-CG-OD1	-8.58	110.58	118.30
1	B	138	ASP	CB-CG-OD1	-8.55	110.60	118.30
1	D	85	TRP	CB-CA-C	8.45	127.30	110.40
1	F	94	VAL	CB-CA-C	-8.38	95.47	111.40
1	A	81	GLU	N-CA-CB	-8.36	95.56	110.60
1	B	138	ASP	CB-CG-OD2	-8.18	110.94	118.30
1	F	73	LEU	CB-CA-C	-8.17	94.68	110.20
1	E	126	VAL	N-CA-C	8.04	132.71	111.00
1	B	98	SER	CB-CA-C	7.94	125.19	110.10
1	A	138	ASP	CB-CG-OD2	-7.91	111.18	118.30
1	D	138	ASP	CB-CG-OD2	-7.86	111.23	118.30
1	C	138	ASP	CB-CG-OD2	-7.84	111.24	118.30
1	F	119	GLN	CB-CA-C	-7.80	94.80	110.40
1	B	112	ILE	CB-CG1-CD1	-7.74	92.24	113.90
1	E	138	ASP	CB-CG-OD2	-7.67	111.40	118.30
1	D	82	ARG	N-CA-CB	-7.59	96.94	110.60
1	A	13	TRP	N-CA-CB	-7.57	96.98	110.60
1	A	52	LYS	CB-CA-C	-7.45	95.51	110.40
1	F	138	ASP	CB-CG-OD2	-7.43	111.61	118.30
1	F	76	PHE	CB-CA-C	-7.21	95.97	110.40
1	F	13	TRP	N-CA-C	-7.14	91.72	111.00
1	D	85	TRP	CA-C-N	7.14	132.91	117.20
1	C	14	PHE	N-CA-CB	-7.08	97.86	110.60
1	C	11	LEU	N-CA-C	7.06	130.06	111.00
1	C	100	LYS	CB-CA-C	-6.95	96.51	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	59	MET	N-CA-C	-6.79	92.66	111.00
1	A	58	GLU	CA-C-N	6.79	132.13	117.20
1	C	99	TYR	N-CA-C	-6.76	92.75	111.00
1	F	95	ALA	N-CA-CB	-6.69	100.73	110.10
1	F	138	ASP	OD1-CG-OD2	-6.66	110.65	123.30
1	F	119	GLN	N-CA-C	6.66	128.97	111.00
1	A	138	ASP	OD1-CG-OD2	-6.61	110.73	123.30
1	B	138	ASP	OD1-CG-OD2	-6.60	110.77	123.30
1	D	70	ILE	N-CA-CB	-6.59	95.65	110.80
1	E	138	ASP	OD1-CG-OD2	-6.58	110.79	123.30
1	C	138	ASP	OD1-CG-OD2	-6.58	110.80	123.30
1	D	138	ASP	OD1-CG-OD2	-6.53	110.90	123.30
1	E	27	SER	N-CA-CB	6.24	119.86	110.50
1	D	86	VAL	N-CA-C	-6.13	94.44	111.00
1	E	205	VAL	CB-CA-C	-6.09	99.84	111.40
1	B	109	ASN	C-N-CD	-6.08	107.21	120.60
1	B	72	GLU	N-CA-C	-6.08	94.60	111.00
1	F	127	THR	C-N-CA	6.04	136.80	121.70
1	C	31	HIS	CB-CA-C	6.02	122.44	110.40
1	F	60	ILE	N-CA-C	-5.97	94.88	111.00
1	E	13	TRP	N-CA-C	5.94	127.03	111.00
1	B	121	ALA	CB-CA-C	-5.75	101.47	110.10
1	F	73	LEU	N-CA-C	5.72	126.45	111.00
1	F	76	PHE	O-C-N	-5.65	113.65	122.70
1	C	39	LEU	CA-CB-CG	-5.52	102.60	115.30
1	A	51	ILE	CB-CA-C	5.49	122.57	111.60
1	C	119	GLN	CB-CA-C	-5.47	99.46	110.40
1	D	81	GLU	N-CA-C	-5.39	96.43	111.00
1	F	114	MET	CB-CA-C	-5.36	99.69	110.40
1	A	53	ASP	N-CA-CB	-5.32	101.02	110.60
1	E	25	SER	CB-CA-C	-5.25	100.12	110.10
1	F	12	GLU	N-CA-C	5.25	125.17	111.00
1	A	51	ILE	N-CA-C	-5.24	96.84	111.00
1	A	81	GLU	N-CA-C	-5.23	96.87	111.00
1	F	32	GLN	CB-CA-C	-5.23	99.94	110.40
1	F	82	ARG	N-CA-C	5.14	124.89	111.00
1	F	39	LEU	CA-CB-CG	-5.04	103.70	115.30
1	C	31	HIS	N-CA-C	-5.04	97.40	111.00
1	A	13	TRP	N-CA-C	-5.01	97.47	111.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	C	81	GLU	CA

All (11) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	138	ASP	Sidechain
1	A	58	GLU	Mainchain
1	B	138	ASP	Sidechain
1	C	138	ASP	Sidechain
1	C	78	GLU	Mainchain
1	C	99	TYR	Peptide
1	D	138	ASP	Sidechain
1	D	85	TRP	Mainchain
1	E	138	ASP	Sidechain
1	F	127	THR	Peptide
1	F	138	ASP	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1576	0	1608	196	0
1	B	1576	0	1609	221	0
1	C	1576	0	1608	229	0
1	D	1576	0	1608	131	0
1	E	1576	0	1608	315	0
1	F	1576	0	1608	366	0
All	All	9456	0	9649	1412	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 74.

All (1412) 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:C:41:TYR:HD1	1:C:69:PHE:CE1	0.96	1.65
1:C:41:TYR:CD1	1:C:69:PHE:CE1	1.86	1.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:51:ILE:HD12	1:F:61:LEU:CG	1.29	1.62
1:E:134:LEU:HG	1:F:195:LEU:CD1	1.21	1.57
1:F:68:ASP:CA	1:F:119:GLN:HE22	1.16	1.56
1:E:134:LEU:CD2	1:F:190:LEU:HD22	1.33	1.55
1:F:51:ILE:CD1	1:F:61:LEU:CG	1.89	1.50
1:D:114:MET:HA	1:D:114:MET:CE	1.42	1.48
1:F:68:ASP:HA	1:F:119:GLN:NE2	1.29	1.47
1:F:51:ILE:CD1	1:F:61:LEU:HD12	1.46	1.45
1:E:25:SER:O	1:E:26:LYS:CG	1.65	1.44
1:E:117:SER:HA	1:E:120:MET:CE	1.47	1.44
1:F:32:GLN:NE2	1:F:85:TRP:CZ3	1.86	1.44
1:F:32:GLN:NE2	1:F:85:TRP:HZ3	1.13	1.44
1:E:39:LEU:HB2	1:E:99:TYR:CE2	1.53	1.43
1:E:84:ALA:CB	1:E:85:TRP:HA	1.31	1.43
1:F:51:ILE:CD1	1:F:61:LEU:CD1	1.96	1.43
1:F:84:ALA:CA	1:F:85:TRP:HB2	1.40	1.42
1:A:81:GLU:HA	1:A:82:ARG:CB	1.18	1.37
1:B:36:ALA:CA	1:B:82:ARG:HH22	1.36	1.36
1:C:80:GLN:O	1:C:81:GLU:HG3	1.21	1.32
1:A:56:GLY:O	1:A:57:LYS:CD	1.77	1.32
1:E:134:LEU:CG	1:F:195:LEU:HD13	1.57	1.31
1:A:81:GLU:CA	1:A:82:ARG:CB	2.08	1.31
1:A:81:GLU:CA	1:A:82:ARG:HB3	1.61	1.30
1:F:121:ALA:O	1:F:124:LEU:HB2	1.29	1.29
1:B:40:TYR:HB2	1:B:70:ILE:CG2	1.63	1.28
1:E:197:SER:OG	1:E:204:VAL:CG1	1.83	1.27
1:E:134:LEU:CG	1:F:195:LEU:CD1	2.14	1.25
1:F:53:ASP:OD2	1:F:54:GLU:HG3	1.31	1.25
1:C:17:HIS:CD2	1:C:105:LEU:HD21	1.71	1.24
1:E:182:THR:O	1:E:186:ILE:HD13	1.36	1.24
1:F:84:ALA:CB	1:F:85:TRP:HB2	1.66	1.23
1:F:116:LEU:HD23	1:F:116:LEU:O	1.33	1.23
1:C:41:TYR:CD1	1:C:69:PHE:HE1	1.36	1.22
1:F:130:LYS:HG2	1:F:189:MET:SD	1.80	1.22
1:A:56:GLY:O	1:A:57:LYS:HD3	1.05	1.22
1:E:197:SER:OG	1:E:204:VAL:HG12	1.33	1.22
1:E:205:VAL:HG12	1:E:206:TYR:N	1.38	1.22
1:C:15:LEU:HD23	1:C:15:LEU:N	1.41	1.21
1:F:51:ILE:CD1	1:F:61:LEU:CB	2.21	1.19
1:C:13:TRP:CG	1:C:13:TRP:O	1.86	1.19
1:F:68:ASP:CA	1:F:119:GLN:NE2	1.86	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:46:SER:H	1:E:90:THR:CG2	1.57	1.17
1:E:205:VAL:CG1	1:E:206:TYR:H	1.44	1.17
1:F:127:THR:O	1:F:127:THR:HG22	1.39	1.17
1:F:51:ILE:HD11	1:F:61:LEU:CB	1.74	1.16
1:E:84:ALA:CB	1:E:85:TRP:CA	2.22	1.16
1:F:116:LEU:HD23	1:F:116:LEU:C	1.59	1.16
1:E:84:ALA:HB3	1:E:85:TRP:HA	1.22	1.16
1:E:134:LEU:CD2	1:F:190:LEU:CD2	2.23	1.16
1:B:36:ALA:HA	1:B:82:ARG:NH2	1.58	1.15
1:F:50:LEU:O	1:F:51:ILE:HG12	1.45	1.15
1:C:35:LYS:O	1:C:36:ALA:O	1.65	1.15
1:E:127:THR:CG2	1:E:128:SER:H	1.60	1.15
1:E:127:THR:CG2	1:E:128:SER:N	2.06	1.14
1:F:123:ARG:HH11	1:F:123:ARG:CG	1.57	1.14
1:A:81:GLU:HA	1:A:82:ARG:HB2	1.14	1.13
1:F:30:ILE:HG12	1:F:86:VAL:HB	1.31	1.13
1:F:84:ALA:HB1	1:F:85:TRP:CB	1.78	1.13
1:D:114:MET:CE	1:D:114:MET:CA	2.27	1.12
1:D:149:ASN:O	1:D:153:GLN:HG2	1.44	1.12
1:F:11:LEU:HD21	1:F:41:TYR:HE1	1.05	1.12
1:D:182:THR:O	1:D:186:ILE:HD13	1.45	1.12
1:E:25:SER:O	1:E:26:LYS:HG2	0.96	1.12
1:C:15:LEU:H	1:C:15:LEU:CD2	1.56	1.11
1:D:114:MET:CA	1:D:114:MET:HE2	1.81	1.11
1:B:40:TYR:HD2	1:B:70:ILE:CG2	1.63	1.11
1:B:40:TYR:CD2	1:B:70:ILE:CG2	2.34	1.11
1:E:123:ARG:O	1:E:126:VAL:HG12	1.46	1.11
1:A:55:GLU:HG3	1:A:56:GLY:N	1.49	1.10
1:E:116:LEU:O	1:E:120:MET:HE2	1.51	1.10
1:D:122:ARG:CB	1:D:122:ARG:HH21	1.63	1.10
1:D:83:SER:O	1:D:84:ALA:O	1.70	1.10
1:E:71:GLY:O	1:E:99:TYR:OH	1.67	1.10
1:C:41:TYR:HD1	1:C:69:PHE:CD1	1.69	1.10
1:E:126:VAL:HG13	1:E:127:THR:N	1.62	1.10
1:E:134:LEU:HD22	1:F:190:LEU:HD22	1.13	1.09
1:A:54:GLU:O	1:A:55:GLU:HG2	1.51	1.09
1:E:46:SER:H	1:E:90:THR:HG23	1.04	1.09
1:C:14:PHE:HB3	1:C:15:LEU:CD2	1.83	1.09
1:F:30:ILE:HD11	1:F:86:VAL:CG2	1.82	1.09
1:A:55:GLU:CG	1:A:56:GLY:H	1.59	1.08
1:C:54:GLU:O	1:C:55:GLU:HB2	1.43	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:25:SER:HB3	1:E:26:LYS:HD3	1.35	1.08
1:A:50:LEU:O	1:A:51:ILE:HG23	1.50	1.08
1:F:51:ILE:CD1	1:F:61:LEU:HB2	1.84	1.08
1:E:29:LEU:HB2	1:E:86:VAL:HG12	1.35	1.08
1:F:84:ALA:CB	1:F:85:TRP:CB	2.30	1.08
1:E:134:LEU:HD21	1:F:190:LEU:HD22	1.27	1.08
1:F:51:ILE:HD13	1:F:61:LEU:HD12	1.21	1.08
1:E:37:GLU:O	1:E:38:THR:HG23	1.54	1.08
1:E:38:THR:HA	1:E:39:LEU:CB	1.83	1.08
1:E:127:THR:HG23	1:E:128:SER:N	1.62	1.08
1:F:51:ILE:HD11	1:F:61:LEU:HD12	1.28	1.08
1:F:127:THR:O	1:F:127:THR:CG2	1.75	1.08
1:E:117:SER:CA	1:E:120:MET:HE3	1.81	1.07
1:F:60:ILE:HG22	1:F:61:LEU:H	0.95	1.07
1:F:60:ILE:HG22	1:F:61:LEU:N	1.68	1.07
1:B:116:LEU:C	1:B:116:LEU:HD23	1.74	1.07
1:F:84:ALA:HB1	1:F:85:TRP:HB3	1.34	1.07
1:F:124:LEU:O	1:F:126:VAL:N	1.88	1.07
1:C:40:TYR:HB3	1:C:70:ILE:HD12	1.33	1.06
1:D:122:ARG:HH21	1:D:122:ARG:CG	1.68	1.06
1:E:134:LEU:HG	1:F:195:LEU:HD12	1.31	1.06
1:F:84:ALA:CA	1:F:85:TRP:CB	2.30	1.06
1:B:30:ILE:HG21	1:B:82:ARG:HD2	1.31	1.06
1:E:17:HIS:CD2	1:E:105:LEU:HD21	1.90	1.06
1:C:14:PHE:HB3	1:C:15:LEU:HD23	1.09	1.06
1:E:25:SER:C	1:E:26:LYS:CD	2.23	1.06
1:E:38:THR:HA	1:E:39:LEU:HB3	1.36	1.05
1:A:35:LYS:N	1:A:81:GLU:HB2	1.72	1.05
1:C:15:LEU:N	1:C:15:LEU:CD2	2.16	1.05
1:B:119:GLN:HG3	1:B:120:MET:H	1.19	1.05
1:B:64:LEU:HD12	1:B:70:ILE:HD11	1.38	1.05
1:C:23:TYR:CG	1:C:29:LEU:HD21	1.91	1.04
1:F:84:ALA:HA	1:F:85:TRP:CB	1.85	1.04
1:E:127:THR:HG22	1:E:128:SER:H	1.16	1.04
1:F:122:ARG:HH21	1:F:122:ARG:CG	1.70	1.04
1:A:56:GLY:C	1:A:57:LYS:HD3	1.76	1.04
1:C:68:ASP:HA	1:C:119:GLN:OE1	1.57	1.04
1:B:54:GLU:O	1:B:55:GLU:HB2	1.58	1.04
1:E:117:SER:CA	1:E:120:MET:CE	2.36	1.04
1:F:123:ARG:HH11	1:F:123:ARG:HG3	1.17	1.04
1:B:30:ILE:HG21	1:B:82:ARG:CD	1.88	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:84:ALA:HB1	1:E:85:TRP:HA	1.04	1.03
1:D:54:GLU:O	1:D:55:GLU:HB2	1.58	1.03
1:F:30:ILE:CD1	1:F:86:VAL:HG23	1.88	1.03
1:C:41:TYR:HD2	1:C:41:TYR:C	1.61	1.02
1:E:25:SER:O	1:E:26:LYS:CD	2.06	1.02
1:F:60:ILE:CG2	1:F:61:LEU:H	1.71	1.02
1:F:41:TYR:CG	1:F:69:PHE:CE1	2.48	1.02
1:D:82:ARG:HG3	1:D:82:ARG:O	1.55	1.02
1:F:41:TYR:CG	1:F:69:PHE:HE1	1.76	1.02
1:F:116:LEU:C	1:F:116:LEU:CD2	2.27	1.02
1:F:122:ARG:HG3	1:F:122:ARG:NH2	1.56	1.02
1:B:170:GLN:HB3	1:B:180:ARG:HD3	1.41	1.01
1:F:194:ASN:C	1:F:206:TYR:HE1	1.64	1.01
1:D:122:ARG:NH2	1:D:122:ARG:HB3	1.76	1.01
1:E:130:LYS:O	1:E:185:ARG:NE	1.56	1.01
1:F:68:ASP:CB	1:F:119:GLN:NE2	2.23	1.01
1:B:72:GLU:O	1:B:73:LEU:HB2	1.56	1.00
1:F:11:LEU:HD21	1:F:41:TYR:CE1	1.96	1.00
1:B:36:ALA:CA	1:B:82:ARG:NH2	2.18	1.00
1:F:70:ILE:HG22	1:F:70:ILE:O	1.62	1.00
1:F:51:ILE:CD1	1:F:61:LEU:HG	1.66	1.00
1:C:17:HIS:HD2	1:C:105:LEU:HD21	0.86	0.99
1:C:23:TYR:CD1	1:C:29:LEU:CD2	2.45	0.99
1:E:84:ALA:HB1	1:E:85:TRP:CA	1.91	0.99
1:C:30:ILE:CG2	1:C:31:HIS:H	1.74	0.99
1:F:51:ILE:HD11	1:F:61:LEU:CD1	1.74	0.99
1:A:50:LEU:CD2	1:A:60:ILE:HG13	1.92	0.99
1:B:51:ILE:HD13	1:B:51:ILE:H	1.28	0.99
1:C:80:GLN:C	1:C:81:GLU:HG3	1.79	0.99
1:B:77:GLU:O	1:B:80:GLN:HB2	1.62	0.99
1:E:56:GLY:O	1:E:57:LYS:HB2	1.58	0.99
1:C:41:TYR:C	1:C:41:TYR:CD2	2.29	0.99
1:D:114:MET:HA	1:D:114:MET:HE3	1.44	0.99
1:B:40:TYR:HB2	1:B:70:ILE:HG22	1.45	0.98
1:E:75:LEU:N	1:E:99:TYR:HE1	1.59	0.98
1:F:30:ILE:HD11	1:F:86:VAL:HG23	0.99	0.98
1:C:41:TYR:HB2	1:C:69:PHE:HD1	1.25	0.98
1:D:122:ARG:CB	1:D:122:ARG:NH2	2.27	0.98
1:C:30:ILE:HD12	1:C:86:VAL:HG23	1.46	0.97
1:D:86:VAL:O	1:D:87:ARG:HG3	1.63	0.97
1:F:122:ARG:HH11	1:F:123:ARG:HH21	1.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:194:ASN:O	1:F:206:TYR:CE1	2.18	0.97
1:C:30:ILE:HD12	1:C:86:VAL:CG2	1.93	0.97
1:C:40:TYR:HB3	1:C:70:ILE:CD1	1.92	0.97
1:C:102:PHE:O	1:C:102:PHE:CD2	2.17	0.97
1:E:39:LEU:CB	1:E:99:TYR:CE2	2.47	0.97
1:F:84:ALA:HA	1:F:85:TRP:HB2	0.99	0.96
1:B:36:ALA:CB	1:B:82:ARG:NH2	2.28	0.96
1:F:41:TYR:HD2	1:F:42:ILE:H	1.09	0.96
1:B:40:TYR:CB	1:B:70:ILE:CG2	2.44	0.96
1:C:41:TYR:CD1	1:C:69:PHE:CD1	2.49	0.95
1:F:189:MET:O	1:F:193:GLN:HG2	1.65	0.95
1:F:123:ARG:N	1:F:123:ARG:CD	2.30	0.95
1:E:14:PHE:O	1:E:17:HIS:HB2	1.67	0.94
1:E:25:SER:C	1:E:26:LYS:HD2	1.86	0.94
1:B:30:ILE:HD11	1:B:40:TYR:CE2	2.01	0.94
1:B:74:GLY:O	1:B:99:TYR:HE1	1.49	0.94
1:A:56:GLY:O	1:A:57:LYS:CG	2.13	0.94
1:C:30:ILE:HG22	1:C:31:HIS:N	1.79	0.94
1:A:50:LEU:O	1:A:51:ILE:CG2	2.16	0.94
1:F:53:ASP:CG	1:F:54:GLU:H	1.67	0.94
1:E:46:SER:N	1:E:90:THR:CG2	2.31	0.94
1:D:32:GLN:OE1	1:D:85:TRP:CE3	2.21	0.94
1:A:171:GLU:O	1:A:175:ILE:HD13	1.67	0.93
1:C:15:LEU:HD23	1:C:15:LEU:H	0.78	0.93
1:F:121:ALA:O	1:F:124:LEU:CB	2.16	0.93
1:B:36:ALA:CB	1:B:82:ARG:HH22	1.80	0.93
1:E:25:SER:OG	1:E:26:LYS:HD2	1.68	0.93
1:E:39:LEU:HB2	1:E:99:TYR:HE2	1.11	0.93
1:B:30:ILE:CG2	1:B:82:ARG:HD2	1.98	0.93
1:D:39:LEU:HB2	1:D:99:TYR:CE2	2.03	0.93
1:E:116:LEU:HD23	1:E:120:MET:HE2	1.50	0.93
1:F:32:GLN:HG3	1:F:83:SER:HA	1.50	0.93
1:A:14:PHE:CD2	1:A:112:ILE:HG21	2.03	0.93
1:B:36:ALA:HA	1:B:82:ARG:HH22	0.78	0.93
1:C:30:ILE:CG2	1:C:31:HIS:N	2.28	0.93
1:E:38:THR:N	1:E:99:TYR:CD2	2.37	0.93
1:C:14:PHE:CB	1:C:15:LEU:HD23	1.98	0.92
1:C:38:THR:O	1:C:99:TYR:CE2	2.22	0.92
1:E:25:SER:C	1:E:26:LYS:CG	2.37	0.92
1:E:126:VAL:HG13	1:E:127:THR:H	1.22	0.92
1:A:81:GLU:HA	1:A:82:ARG:HB3	0.94	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:32:GLN:HE22	1:F:85:TRP:HZ3	1.15	0.92
1:F:30:ILE:HG13	1:F:86:VAL:H	1.33	0.92
1:B:30:ILE:O	1:B:85:TRP:HB2	1.70	0.91
1:F:41:TYR:CD2	1:F:42:ILE:N	2.38	0.91
1:C:17:HIS:HD2	1:C:105:LEU:CD2	1.80	0.91
1:A:35:LYS:HA	1:A:81:GLU:CB	1.99	0.91
1:C:80:GLN:HE21	1:C:80:GLN:N	1.69	0.91
1:E:30:ILE:HG21	1:E:82:ARG:CD	2.00	0.91
1:E:164:GLN:HB2	1:E:204:VAL:HG23	1.52	0.91
1:F:122:ARG:NH1	1:F:123:ARG:HH21	1.56	0.91
1:A:80:GLN:N	1:A:80:GLN:HE21	1.69	0.91
1:E:116:LEU:HD23	1:E:120:MET:CE	2.01	0.91
1:E:84:ALA:HB3	1:E:85:TRP:CA	1.94	0.90
1:E:120:MET:SD	1:F:120:MET:HE3	2.10	0.90
1:F:164:GLN:HA	1:F:204:VAL:HA	1.53	0.90
1:B:40:TYR:HB2	1:B:70:ILE:HG21	1.50	0.90
1:F:126:VAL:HG12	1:F:193:GLN:NE2	1.85	0.90
1:D:114:MET:HA	1:D:114:MET:HE2	0.91	0.90
1:E:15:LEU:C	1:E:17:HIS:H	1.74	0.90
1:E:30:ILE:HG21	1:E:82:ARG:NE	1.87	0.90
1:F:123:ARG:N	1:F:123:ARG:HD2	1.85	0.90
1:A:58:GLU:O	1:A:59:MET:C	2.00	0.90
1:B:40:TYR:CD2	1:B:70:ILE:HG21	2.04	0.90
1:E:30:ILE:HG21	1:E:82:ARG:HD2	1.52	0.90
1:A:81:GLU:O	1:A:81:GLU:HG3	1.71	0.89
1:F:194:ASN:C	1:F:206:TYR:CE1	2.45	0.89
1:A:100:LYS:HD2	1:E:34:GLU:HG2	1.51	0.89
1:E:20:ILE:HD12	1:E:20:ILE:H	1.37	0.89
1:E:29:LEU:HB2	1:E:86:VAL:CG1	2.01	0.89
1:A:80:GLN:HE21	1:A:80:GLN:CA	1.84	0.89
1:C:80:GLN:O	1:C:81:GLU:CG	2.16	0.89
1:E:116:LEU:C	1:E:120:MET:HE2	1.93	0.89
1:E:117:SER:HA	1:E:120:MET:HE3	0.89	0.89
1:F:122:ARG:HH21	1:F:122:ARG:HG3	0.76	0.89
1:C:98:SER:C	1:C:100:LYS:H	1.76	0.89
1:F:53:ASP:CG	1:F:54:GLU:N	2.24	0.89
1:C:43:VAL:O	1:C:44:LYS:HG3	1.73	0.89
1:E:37:GLU:C	1:E:38:THR:HG23	1.91	0.88
1:E:46:SER:OG	1:E:90:THR:CG2	2.21	0.88
1:E:15:LEU:O	1:E:17:HIS:N	2.07	0.88
1:E:46:SER:OG	1:E:90:THR:HG22	1.74	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:35:LYS:CA	1:A:81:GLU:HB3	2.03	0.88
1:A:60:ILE:HG22	1:A:61:LEU:N	1.88	0.88
1:E:25:SER:CB	1:E:26:LYS:CD	2.52	0.88
1:F:122:ARG:NH1	1:F:123:ARG:NH2	2.22	0.88
1:A:82:ARG:HG3	1:A:82:ARG:O	1.73	0.88
1:C:41:TYR:CD2	1:C:42:ILE:N	2.41	0.87
1:E:25:SER:CB	1:E:26:LYS:HD3	2.05	0.87
1:F:32:GLN:CA	1:F:83:SER:O	2.21	0.87
1:B:64:LEU:HD12	1:B:70:ILE:CD1	2.05	0.87
1:F:122:ARG:HH11	1:F:123:ARG:NH2	1.71	0.87
1:E:75:LEU:HA	1:E:99:TYR:CD1	2.09	0.87
1:E:162:GLY:HA3	1:E:207:GLY:N	1.89	0.87
1:A:35:LYS:N	1:A:81:GLU:CB	2.38	0.87
1:A:35:LYS:HA	1:A:81:GLU:HB3	1.55	0.87
1:F:123:ARG:HG3	1:F:123:ARG:NH1	1.82	0.86
1:C:14:PHE:CE2	1:C:112:ILE:HG21	2.10	0.86
1:E:30:ILE:CG2	1:E:82:ARG:HD2	2.06	0.86
1:E:134:LEU:H	1:F:195:LEU:CD1	1.87	0.86
1:E:204:VAL:O	1:E:204:VAL:HG13	1.75	0.86
1:C:41:TYR:HB2	1:C:69:PHE:CD1	2.10	0.86
1:A:14:PHE:CE2	1:A:112:ILE:HG21	2.11	0.86
1:A:80:GLN:CA	1:A:80:GLN:NE2	2.35	0.86
1:E:134:LEU:CD1	1:F:195:LEU:HB3	2.06	0.86
1:D:122:ARG:HH21	1:D:122:ARG:HG3	1.39	0.86
1:F:41:TYR:CD2	1:F:69:PHE:HE1	1.94	0.85
1:B:51:ILE:HD13	1:B:51:ILE:N	1.91	0.85
1:A:35:LYS:H	1:A:81:GLU:HB2	1.39	0.85
1:A:60:ILE:CG2	1:A:61:LEU:H	1.90	0.85
1:C:23:TYR:CG	1:C:29:LEU:CD2	2.57	0.85
1:E:39:LEU:HB2	1:E:99:TYR:CD2	2.11	0.85
1:C:30:ILE:HG23	1:C:31:HIS:H	1.41	0.85
1:F:123:ARG:O	1:F:124:LEU:HD23	1.77	0.85
1:F:51:ILE:O	1:F:59:MET:HB2	1.76	0.85
1:C:30:ILE:O	1:C:31:HIS:CG	2.30	0.85
1:E:134:LEU:CB	1:F:195:LEU:HD13	2.07	0.85
1:F:41:TYR:O	1:F:94:VAL:HG13	1.76	0.84
1:F:69:PHE:O	1:F:70:ILE:HB	1.74	0.84
1:E:30:ILE:CG2	1:E:82:ARG:HE	1.89	0.84
1:E:14:PHE:CD2	1:E:105:LEU:CD1	2.60	0.84
1:A:50:LEU:HD21	1:A:60:ILE:HG13	1.57	0.84
1:E:205:VAL:HG12	1:E:206:TYR:H	0.67	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:164:GLN:HB2	1:F:204:VAL:HG22	1.57	0.84
1:F:194:ASN:O	1:F:206:TYR:CD1	2.31	0.84
1:A:53:ASP:OD1	1:A:54:GLU:N	2.11	0.83
1:A:10:THR:HG23	1:A:112:ILE:CD1	2.07	0.83
1:C:10:THR:O	1:C:13:TRP:HB3	1.78	0.83
1:F:50:LEU:O	1:F:84:ALA:CB	2.27	0.83
1:F:69:PHE:N	1:F:119:GLN:NE2	2.26	0.83
1:E:39:LEU:CB	1:E:99:TYR:HE2	1.84	0.83
1:B:44:LYS:O	1:B:92:CYS:HB2	1.78	0.83
1:F:123:ARG:HH11	1:F:123:ARG:HG2	1.44	0.83
1:B:36:ALA:HB2	1:B:82:ARG:NH2	1.92	0.82
1:E:164:GLN:HA	1:E:204:VAL:HA	1.61	0.82
1:A:10:THR:HG23	1:A:112:ILE:HD11	1.60	0.82
1:A:165:ILE:HD13	1:A:203:ILE:O	1.80	0.82
1:B:116:LEU:C	1:B:116:LEU:CD2	2.47	0.82
1:E:46:SER:N	1:E:90:THR:HG23	1.89	0.82
1:E:126:VAL:CG1	1:E:127:THR:H	1.91	0.82
1:F:69:PHE:H	1:F:119:GLN:NE2	1.77	0.82
1:C:17:HIS:CD2	1:C:105:LEU:CD2	2.58	0.82
1:E:204:VAL:HG22	1:E:205:VAL:O	1.80	0.82
1:F:14:PHE:CD1	1:F:14:PHE:C	2.53	0.82
1:A:189:MET:O	1:A:193:GLN:HG2	1.80	0.81
1:D:80:GLN:HG2	1:D:81:GLU:O	1.80	0.81
1:A:38:THR:HG22	1:A:39:LEU:O	1.80	0.81
1:B:40:TYR:CB	1:B:70:ILE:HG22	2.06	0.81
1:B:127:THR:HG23	1:B:127:THR:O	1.80	0.81
1:E:20:ILE:HD12	1:E:20:ILE:N	1.95	0.81
1:C:54:GLU:O	1:C:55:GLU:CB	2.28	0.81
1:E:13:TRP:O	1:E:13:TRP:CD1	2.33	0.81
1:E:14:PHE:HD2	1:E:105:LEU:HD13	1.44	0.81
1:E:14:PHE:CE2	1:E:105:LEU:HD12	2.14	0.81
1:E:40:TYR:CD2	1:E:70:ILE:HB	2.16	0.81
1:E:75:LEU:HA	1:E:99:TYR:CE1	2.15	0.81
1:B:30:ILE:HD11	1:B:40:TYR:CD2	2.14	0.81
1:F:51:ILE:CG1	1:F:61:LEU:HB2	2.09	0.81
1:A:82:ARG:O	1:A:82:ARG:CG	2.29	0.81
1:B:21:HIS:ND1	1:B:23:TYR:CE2	2.48	0.81
1:B:38:THR:HG22	1:B:39:LEU:O	1.80	0.81
1:E:42:ILE:HD12	1:E:68:ASP:HB2	1.63	0.81
1:A:35:LYS:CA	1:A:81:GLU:CB	2.60	0.80
1:A:35:LYS:H	1:A:81:GLU:CB	1.94	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:25:SER:HB3	1:E:26:LYS:CD	2.10	0.80
1:E:134:LEU:HG	1:F:195:LEU:HD13	0.81	0.80
1:B:119:GLN:O	1:B:120:MET:C	2.19	0.80
1:B:127:THR:O	1:B:128:SER:HB2	1.81	0.80
1:C:40:TYR:CE1	1:C:96:GLU:OE1	2.35	0.80
1:E:30:ILE:CG2	1:E:82:ARG:NE	2.43	0.80
1:B:40:TYR:CD2	1:B:70:ILE:HG22	2.15	0.80
1:E:37:GLU:O	1:E:38:THR:CG2	2.29	0.80
1:A:55:GLU:HG3	1:A:56:GLY:H	0.70	0.80
1:E:30:ILE:O	1:E:85:TRP:HB2	1.82	0.80
1:E:150:LEU:HA	1:E:153:GLN:CG	2.12	0.80
1:F:46:SER:H	1:F:90:THR:CG2	1.95	0.80
1:B:51:ILE:HD12	1:B:61:LEU:HG	1.63	0.79
1:F:41:TYR:HD2	1:F:42:ILE:N	1.78	0.79
1:F:69:PHE:O	1:F:70:ILE:CB	2.30	0.79
1:F:195:LEU:HA	1:F:206:TYR:HD1	1.47	0.79
1:E:75:LEU:CA	1:E:99:TYR:CE1	2.66	0.79
1:F:114:MET:HA	1:F:114:MET:CE	2.12	0.79
1:E:75:LEU:N	1:E:99:TYR:CE1	2.49	0.79
1:C:80:GLN:N	1:C:80:GLN:NE2	2.31	0.79
1:E:138:ASP:HA	1:F:141:GLY:HA2	1.65	0.79
1:E:196:ILE:HG22	1:E:205:VAL:HA	1.63	0.79
1:F:123:ARG:O	1:F:124:LEU:CD2	2.30	0.79
1:A:10:THR:CG2	1:A:112:ILE:CD1	2.60	0.79
1:E:162:GLY:HA3	1:E:207:GLY:H	1.47	0.79
1:B:74:GLY:O	1:B:99:TYR:CE1	2.36	0.79
1:B:77:GLU:HB3	1:B:80:GLN:HG3	1.65	0.79
1:F:52:LYS:HB3	1:F:57:LYS:O	1.82	0.79
1:F:124:LEU:O	1:F:125:GLN:C	2.22	0.79
1:E:17:HIS:HD2	1:E:105:LEU:HD21	1.46	0.78
1:A:62:SER:OG	1:A:63:TYR:N	2.16	0.78
1:B:119:GLN:HG3	1:B:120:MET:N	1.98	0.78
1:D:38:THR:HG22	1:D:39:LEU:O	1.83	0.78
1:F:20:ILE:HD12	1:F:20:ILE:N	1.98	0.78
1:F:162:GLY:HA3	1:F:205:VAL:O	1.83	0.78
1:F:32:GLN:HA	1:F:83:SER:O	1.82	0.78
1:F:41:TYR:CD2	1:F:69:PHE:CE1	2.71	0.78
1:A:54:GLU:O	1:A:55:GLU:CG	2.32	0.78
1:F:125:GLN:O	1:F:129:GLU:HG3	1.83	0.78
1:E:164:GLN:CB	1:E:204:VAL:HG23	2.14	0.78
1:F:68:ASP:HB3	1:F:119:GLN:HE21	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:197:SER:OG	1:E:204:VAL:HG11	1.81	0.78
1:B:21:HIS:CE1	1:B:23:TYR:OH	2.36	0.78
1:B:51:ILE:HD13	1:B:59:MET:O	1.83	0.78
1:C:13:TRP:O	1:C:13:TRP:CD1	2.37	0.77
1:E:40:TYR:HB2	1:E:70:ILE:HG12	1.67	0.77
1:E:134:LEU:CD2	1:F:195:LEU:HD12	2.14	0.77
1:A:10:THR:CG2	1:A:112:ILE:HD12	2.14	0.77
1:A:60:ILE:HG22	1:A:61:LEU:H	1.44	0.77
1:B:85:TRP:HE3	1:B:85:TRP:H	1.32	0.77
1:B:128:SER:O	1:B:129:GLU:C	2.19	0.77
1:F:19:HIS:O	1:F:95:ALA:HA	1.83	0.77
1:E:51:ILE:HD12	1:E:59:MET:HB3	1.65	0.77
1:F:126:VAL:HG12	1:F:193:GLN:HE22	1.48	0.77
1:B:115:ARG:O	1:B:118:ALA:HB3	1.85	0.77
1:F:50:LEU:O	1:F:51:ILE:CG1	2.30	0.77
1:C:80:GLN:HE21	1:C:80:GLN:CA	1.97	0.76
1:B:39:LEU:HB2	1:B:99:TYR:CE2	2.19	0.76
1:E:134:LEU:CG	1:F:195:LEU:HD12	1.99	0.76
1:B:30:ILE:CD1	1:B:40:TYR:CE2	2.67	0.76
1:A:80:GLN:NE2	1:A:80:GLN:HA	2.01	0.76
1:F:30:ILE:HG12	1:F:86:VAL:CB	2.13	0.76
1:E:40:TYR:O	1:E:69:PHE:HA	1.86	0.76
1:F:32:GLN:HG3	1:F:83:SER:CA	2.15	0.76
1:F:53:ASP:OD2	1:F:54:GLU:CG	2.25	0.76
1:A:11:LEU:HD22	1:A:11:LEU:O	1.85	0.76
1:E:69:PHE:HD2	1:E:119:GLN:HE21	1.34	0.76
1:E:30:ILE:CG2	1:E:82:ARG:CD	2.63	0.76
1:B:40:TYR:CB	1:B:70:ILE:HG21	2.13	0.76
1:B:115:ARG:O	1:B:118:ALA:N	2.19	0.76
1:E:134:LEU:HD22	1:F:190:LEU:CD2	2.00	0.76
1:D:39:LEU:HB2	1:D:99:TYR:HE2	1.49	0.76
1:F:30:ILE:CG1	1:F:86:VAL:H	1.99	0.76
1:F:195:LEU:HA	1:F:206:TYR:CD1	2.21	0.76
1:B:40:TYR:HB2	1:B:70:ILE:CB	2.15	0.76
1:E:14:PHE:HE2	1:E:105:LEU:HD12	1.51	0.75
1:C:83:SER:O	1:C:84:ALA:CB	2.33	0.75
1:E:150:LEU:HA	1:E:153:GLN:HG2	1.68	0.75
1:D:37:GLU:HA	1:D:99:TYR:CD1	2.20	0.75
1:F:70:ILE:O	1:F:70:ILE:CG2	2.34	0.75
1:A:56:GLY:O	1:A:57:LYS:CB	2.34	0.75
1:E:38:THR:CA	1:E:39:LEU:CB	2.63	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:130:LYS:CG	1:F:189:MET:SD	2.69	0.75
1:E:30:ILE:HG23	1:E:82:ARG:HE	1.49	0.75
1:F:51:ILE:HG13	1:F:61:LEU:HB2	1.67	0.75
1:F:69:PHE:H	1:F:119:GLN:HE21	1.34	0.75
1:F:30:ILE:CD1	1:F:86:VAL:CG2	2.56	0.75
1:B:74:GLY:C	1:B:99:TYR:HE1	1.90	0.74
1:F:204:VAL:HG12	1:F:205:VAL:N	2.01	0.74
1:F:151:ALA:HA	1:F:165:ILE:CG2	2.18	0.74
1:B:64:LEU:CD1	1:B:70:ILE:CD1	2.65	0.74
1:C:38:THR:O	1:C:99:TYR:HE2	1.68	0.74
1:C:8:ASP:CG	1:C:115:ARG:HH12	1.91	0.74
1:E:25:SER:CB	1:E:26:LYS:HD2	2.14	0.74
1:F:163:MET:O	1:F:205:VAL:N	2.20	0.74
1:C:26:LYS:N	1:C:88:ALA:O	2.20	0.74
1:E:134:LEU:N	1:F:195:LEU:CD1	2.51	0.74
1:E:164:GLN:HG3	1:E:204:VAL:HB	1.69	0.74
1:B:21:HIS:HD1	1:B:23:TYR:HE2	1.31	0.74
1:C:80:GLN:NE2	1:C:80:GLN:H	1.85	0.74
1:E:134:LEU:H	1:F:195:LEU:HD13	1.51	0.74
1:E:51:ILE:CD1	1:E:59:MET:HB3	2.16	0.74
1:E:53:ASP:OD2	1:E:59:MET:CE	2.36	0.74
1:E:134:LEU:HD21	1:F:190:LEU:CD2	2.04	0.74
1:F:38:THR:HG22	1:F:39:LEU:O	1.87	0.73
1:B:83:SER:O	1:B:84:ALA:HB3	1.86	0.73
1:F:13:TRP:CE3	1:F:14:PHE:N	2.56	0.73
1:B:40:TYR:CG	1:B:70:ILE:CG2	2.71	0.73
1:F:41:TYR:O	1:F:94:VAL:CG1	2.36	0.73
1:B:198:ALA:HA	1:B:203:ILE:HD13	1.69	0.73
1:D:63:TYR:HE1	1:D:89:LYS:HD2	1.53	0.73
1:C:150:LEU:HA	1:C:153:GLN:HG2	1.69	0.73
1:E:134:LEU:HG	1:F:195:LEU:CG	2.16	0.73
1:D:41:TYR:HD1	1:D:69:PHE:CE1	2.06	0.73
1:D:111:ASP:O	1:D:114:MET:HB2	1.88	0.73
1:F:68:ASP:C	1:F:119:GLN:NE2	2.42	0.73
1:B:40:TYR:CG	1:B:70:ILE:HG21	2.22	0.72
1:B:116:LEU:HD23	1:B:117:SER:N	2.03	0.72
1:C:69:PHE:H	1:C:119:GLN:HE22	1.35	0.72
1:E:41:TYR:HA	1:E:68:ASP:O	1.88	0.72
1:E:38:THR:CA	1:E:99:TYR:CE2	2.72	0.72
1:F:17:HIS:CD2	1:F:105:LEU:HD21	2.24	0.72
1:C:101:LYS:O	1:C:104:GLN:N	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:122:ARG:O	1:B:126:VAL:HG23	1.89	0.72
1:D:86:VAL:O	1:D:87:ARG:CG	2.36	0.72
1:F:123:ARG:CD	1:F:123:ARG:H	2.02	0.72
1:E:13:TRP:O	1:E:13:TRP:CG	2.39	0.72
1:F:58:GLU:C	1:F:59:MET:O	2.22	0.71
1:F:122:ARG:HG2	1:F:123:ARG:N	2.02	0.71
1:A:112:ILE:HD12	1:A:112:ILE:N	2.03	0.71
1:C:13:TRP:O	1:C:13:TRP:CD2	2.43	0.71
1:F:51:ILE:HD12	1:F:61:LEU:HG	0.72	0.71
1:D:106:ILE:HD12	1:D:113:LEU:HB2	1.71	0.71
1:C:8:ASP:OD1	1:C:115:ARG:NH1	2.24	0.71
1:D:70:ILE:HG22	1:D:71:GLY:N	2.02	0.71
1:D:102:PHE:CE2	1:D:106:ILE:HD11	2.25	0.71
1:A:83:SER:O	1:A:84:ALA:HB2	1.89	0.71
1:B:54:GLU:O	1:B:55:GLU:CB	2.35	0.71
1:C:102:PHE:O	1:C:102:PHE:HD2	1.68	0.71
1:E:134:LEU:H	1:F:195:LEU:HD11	1.55	0.71
1:C:98:SER:O	1:C:100:LYS:N	2.20	0.71
1:F:51:ILE:HD11	1:F:61:LEU:CG	1.84	0.71
1:A:76:PHE:O	1:A:77:GLU:HB3	1.89	0.70
1:E:40:TYR:HB2	1:E:70:ILE:CG1	2.20	0.70
1:A:60:ILE:CG2	1:A:61:LEU:N	2.47	0.70
1:B:72:GLU:O	1:B:73:LEU:CB	2.38	0.70
1:B:165:ILE:HD11	1:B:203:ILE:HB	1.72	0.70
1:A:83:SER:O	1:A:84:ALA:CB	2.39	0.70
1:E:28:THR:HA	1:E:87:ARG:HG3	1.73	0.70
1:F:94:VAL:HG12	1:F:95:ALA:N	2.05	0.70
1:C:149:ASN:O	1:C:153:GLN:HG2	1.91	0.70
1:E:116:LEU:O	1:E:120:MET:CE	2.37	0.70
1:F:51:ILE:HD12	1:F:61:LEU:CB	2.02	0.70
1:A:50:LEU:C	1:A:51:ILE:HG23	2.10	0.70
1:E:189:MET:O	1:E:193:GLN:HG2	1.92	0.70
1:F:68:ASP:HB3	1:F:119:GLN:NE2	1.99	0.70
1:C:30:ILE:HD12	1:C:86:VAL:HG21	1.72	0.70
1:D:112:ILE:HD12	1:D:112:ILE:N	2.06	0.70
1:F:123:ARG:H	1:F:123:ARG:HD3	1.55	0.70
1:E:14:PHE:CE2	1:E:105:LEU:CD1	2.75	0.70
1:E:134:LEU:CD1	1:F:195:LEU:CB	2.70	0.70
1:F:123:ARG:C	1:F:124:LEU:HD23	2.12	0.70
1:A:164:GLN:HB2	1:A:204:VAL:HG22	1.74	0.70
1:D:114:MET:CA	1:D:114:MET:HE3	2.09	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:122:ARG:C	1:F:124:LEU:H	1.95	0.70
1:A:49:VAL:O	1:A:61:LEU:HB2	1.92	0.69
1:D:70:ILE:O	1:D:72:GLU:N	2.25	0.69
1:A:97:ILE:HD11	1:A:101:LYS:HE3	1.74	0.69
1:F:63:TYR:HE1	1:F:89:LYS:HD2	1.57	0.69
1:A:72:GLU:CD	1:A:123:ARG:HH22	1.95	0.69
1:B:38:THR:O	1:B:82:ARG:NH1	2.26	0.69
1:E:25:SER:OG	1:E:26:LYS:CD	2.39	0.69
1:F:41:TYR:CD1	1:F:69:PHE:HE1	2.11	0.69
1:B:38:THR:CA	1:B:99:TYR:CE2	2.76	0.69
1:E:134:LEU:HD12	1:F:195:LEU:HB3	1.72	0.69
1:F:54:GLU:O	1:F:56:GLY:N	2.20	0.69
1:F:164:GLN:OE1	1:F:202:THR:HG21	1.92	0.69
1:C:39:LEU:O	1:C:40:TYR:HB2	1.91	0.69
1:C:104:GLN:O	1:C:107:GLN:N	2.26	0.69
1:C:150:LEU:HA	1:C:153:GLN:CG	2.23	0.69
1:E:17:HIS:O	1:E:97:ILE:HD12	1.93	0.69
1:A:8:ASP:OD1	1:A:115:ARG:NH2	2.22	0.69
1:F:63:TYR:CE1	1:F:89:LYS:HD2	2.28	0.69
1:C:23:TYR:CB	1:C:29:LEU:HD21	2.23	0.68
1:C:80:GLN:C	1:C:81:GLU:CG	2.58	0.68
1:C:33:GLY:O	1:C:34:GLU:O	2.12	0.68
1:F:50:LEU:O	1:F:84:ALA:HB2	1.92	0.68
1:C:38:THR:O	1:C:99:TYR:CD2	2.47	0.68
1:F:39:LEU:HD12	1:F:71:GLY:HA3	1.75	0.68
1:B:118:ALA:O	1:B:119:GLN:C	2.32	0.68
1:C:14:PHE:O	1:C:16:SER:C	2.31	0.68
1:C:69:PHE:HD2	1:C:116:LEU:HA	1.59	0.68
1:E:65:ASN:N	1:E:68:ASP:OD2	2.27	0.68
1:C:69:PHE:CD2	1:C:116:LEU:HA	2.28	0.68
1:C:103:ARG:HH21	1:C:103:ARG:HG3	1.58	0.68
1:E:15:LEU:C	1:E:17:HIS:N	2.44	0.68
1:E:80:GLN:HG2	1:E:81:GLU:H	1.59	0.68
1:E:124:LEU:O	1:E:127:THR:HG22	1.93	0.68
1:F:43:VAL:HB	1:F:93:GLU:OE2	1.94	0.68
1:E:53:ASP:OD2	1:E:59:MET:HE1	1.93	0.68
1:F:58:GLU:O	1:F:59:MET:C	2.31	0.68
1:F:114:MET:HA	1:F:114:MET:HE2	1.76	0.68
1:F:164:GLN:CB	1:F:204:VAL:HG22	2.24	0.68
1:E:46:SER:N	1:E:90:THR:HG21	2.06	0.68
1:B:32:GLN:NE2	1:B:85:TRP:CZ3	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:38:THR:CA	1:E:99:TYR:CD2	2.77	0.67
1:F:32:GLN:HG3	1:F:83:SER:O	1.93	0.67
1:B:83:SER:O	1:B:84:ALA:CB	2.40	0.67
1:B:120:MET:O	1:B:123:ARG:HB2	1.95	0.67
1:B:74:GLY:C	1:B:99:TYR:CE1	2.68	0.67
1:E:15:LEU:H	1:E:15:LEU:HD23	1.59	0.67
1:A:56:GLY:C	1:A:57:LYS:CD	2.48	0.67
1:B:51:ILE:N	1:B:51:ILE:CD1	2.58	0.67
1:C:40:TYR:CB	1:C:70:ILE:HD12	2.18	0.67
1:E:46:SER:OG	1:E:90:THR:HG21	1.93	0.67
1:E:120:MET:O	1:E:123:ARG:HB3	1.93	0.67
1:B:116:LEU:HD23	1:B:116:LEU:O	1.94	0.67
1:D:41:TYR:HD1	1:D:69:PHE:CD1	2.13	0.67
1:B:45:GLY:HA3	1:B:92:CYS:HB3	1.76	0.67
1:B:189:MET:O	1:B:193:GLN:HG2	1.95	0.67
1:C:20:ILE:N	1:C:20:ILE:HD12	2.09	0.67
1:C:17:HIS:O	1:C:97:ILE:HD12	1.94	0.67
1:F:20:ILE:HD12	1:F:20:ILE:H	1.60	0.67
1:F:51:ILE:HD13	1:F:61:LEU:CD1	1.92	0.67
1:A:30:ILE:HD11	1:A:40:TYR:CZ	2.30	0.67
1:D:44:LYS:O	1:D:92:CYS:HB2	1.95	0.67
1:B:32:GLN:NE2	1:B:85:TRP:CE3	2.63	0.66
1:B:40:TYR:HD2	1:B:70:ILE:HG23	1.57	0.66
1:C:23:TYR:CD1	1:C:29:LEU:HD23	2.28	0.66
1:F:28:THR:HG21	1:F:31:HIS:ND1	2.09	0.66
1:C:20:ILE:HD12	1:C:20:ILE:H	1.59	0.66
1:E:31:HIS:HD2	1:E:34:GLU:OE1	1.79	0.66
1:A:70:ILE:O	1:A:71:GLY:C	2.34	0.66
1:A:111:ASP:O	1:A:114:MET:HB2	1.95	0.66
1:B:51:ILE:CG2	1:B:84:ALA:HB2	2.25	0.66
1:B:119:GLN:O	1:B:122:ARG:N	2.28	0.66
1:D:189:MET:O	1:D:193:GLN:HG2	1.95	0.66
1:F:74:GLY:O	1:F:75:LEU:C	2.32	0.66
1:C:50:LEU:HD23	1:C:87:ARG:HD3	1.77	0.66
1:E:26:LYS:HD2	1:E:26:LYS:N	2.10	0.66
1:F:102:PHE:CE2	1:F:106:ILE:HD11	2.30	0.66
1:A:38:THR:HA	1:A:39:LEU:HB3	1.78	0.66
1:C:11:LEU:O	1:C:15:LEU:HG	1.95	0.66
1:A:80:GLN:HE21	1:A:80:GLN:HA	1.61	0.66
1:C:16:SER:O	1:C:17:HIS:HB2	1.96	0.66
1:D:112:ILE:HD12	1:D:112:ILE:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:205:VAL:HG12	1:E:206:TYR:CA	2.24	0.66
1:F:50:LEU:C	1:F:51:ILE:CG1	2.64	0.66
1:F:50:LEU:C	1:F:51:ILE:HG12	2.14	0.65
1:E:10:THR:O	1:E:13:TRP:HB3	1.97	0.65
1:C:114:MET:CE	1:C:114:MET:HA	2.25	0.65
1:E:90:THR:O	1:E:91:ALA:C	2.33	0.65
1:B:32:GLN:CG	1:B:32:GLN:O	2.44	0.65
1:B:119:GLN:O	1:B:123:ARG:N	2.24	0.65
1:A:29:LEU:C	1:A:30:ILE:HD13	2.16	0.65
1:A:72:GLU:CD	1:A:72:GLU:H	2.00	0.65
1:B:77:GLU:CB	1:B:80:GLN:HG3	2.25	0.65
1:B:116:LEU:CD2	1:B:117:SER:N	2.59	0.65
1:F:114:MET:HA	1:F:114:MET:HE3	1.78	0.65
1:F:117:SER:HB3	1:F:120:MET:CE	2.27	0.65
1:B:41:TYR:CD1	1:B:69:PHE:CE2	2.84	0.65
1:E:134:LEU:HD11	1:F:195:LEU:CB	2.27	0.65
1:B:111:ASP:O	1:B:114:MET:HB2	1.96	0.65
1:C:10:THR:HG21	1:C:111:ASP:HB3	1.77	0.65
1:E:150:LEU:O	1:E:153:GLN:HB2	1.97	0.65
1:E:164:GLN:CA	1:E:204:VAL:HG23	2.27	0.65
1:D:63:TYR:CE1	1:D:89:LYS:HD2	2.32	0.65
1:E:8:ASP:OD2	1:E:115:ARG:NH1	2.30	0.65
1:A:55:GLU:CG	1:A:56:GLY:N	2.30	0.65
1:E:75:LEU:CA	1:E:99:TYR:HE1	2.08	0.65
1:B:115:ARG:O	1:B:118:ALA:CB	2.45	0.64
1:A:165:ILE:HD13	1:A:165:ILE:H	1.62	0.64
1:D:82:ARG:O	1:D:82:ARG:CG	2.38	0.64
1:C:41:TYR:HD2	1:C:41:TYR:O	1.80	0.64
1:C:14:PHE:HD1	1:C:15:LEU:CD2	2.10	0.64
1:C:40:TYR:HE1	1:C:96:GLU:OE1	1.79	0.64
1:E:204:VAL:CG1	1:E:204:VAL:O	2.45	0.64
1:F:41:TYR:CD1	1:F:69:PHE:CE1	2.86	0.64
1:F:124:LEU:O	1:F:127:THR:N	2.30	0.64
1:F:53:ASP:OD2	1:F:54:GLU:N	2.29	0.64
1:F:53:ASP:CG	1:F:54:GLU:HG3	2.15	0.64
1:E:84:ALA:HB3	1:E:85:TRP:CB	2.27	0.64
1:F:97:ILE:HD11	1:F:101:LYS:HE3	1.80	0.64
1:A:75:LEU:HD13	1:A:99:TYR:CD2	2.33	0.64
1:A:50:LEU:HD22	1:A:60:ILE:HG13	1.79	0.63
1:B:120:MET:O	1:B:123:ARG:N	2.31	0.63
1:C:83:SER:O	1:C:84:ALA:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:167:ILE:HD13	1:F:172:ILE:CD1	2.28	0.63
1:D:41:TYR:CD1	1:D:69:PHE:CE1	2.87	0.63
1:D:70:ILE:CG2	1:D:71:GLY:N	2.60	0.63
1:E:134:LEU:N	1:F:195:LEU:HD11	2.11	0.63
1:A:198:ALA:HA	1:A:203:ILE:HD13	1.79	0.63
1:E:124:LEU:O	1:E:125:GLN:C	2.36	0.63
1:F:32:GLN:HG3	1:F:83:SER:C	2.19	0.63
1:C:41:TYR:CE1	1:C:69:PHE:CE1	2.75	0.63
1:C:112:ILE:H	1:C:112:ILE:HD12	1.62	0.63
1:F:13:TRP:HE3	1:F:14:PHE:H	1.46	0.63
1:E:164:GLN:HB2	1:E:204:VAL:CG2	2.26	0.63
1:F:69:PHE:N	1:F:119:GLN:HE21	1.93	0.63
1:B:21:HIS:ND1	1:B:23:TYR:HE2	1.90	0.62
1:E:150:LEU:HA	1:E:153:GLN:HG3	1.79	0.62
1:C:69:PHE:N	1:C:119:GLN:HE22	1.96	0.62
1:F:195:LEU:CA	1:F:206:TYR:CD1	2.82	0.62
1:D:150:LEU:HA	1:D:153:GLN:CG	2.29	0.62
1:F:11:LEU:CD2	1:F:41:TYR:HE1	1.98	0.62
1:A:38:THR:HA	1:A:39:LEU:CB	2.29	0.62
1:A:164:GLN:CB	1:A:204:VAL:HG22	2.30	0.62
1:D:39:LEU:HB2	1:D:99:TYR:CD2	2.34	0.62
1:E:74:GLY:HA2	1:E:77:GLU:HB2	1.80	0.62
1:B:32:GLN:N	1:B:85:TRP:HB3	2.13	0.62
1:C:36:ALA:O	1:C:37:GLU:HB3	1.99	0.62
1:E:24:PRO:O	1:E:27:SER:HB3	2.00	0.62
1:E:182:THR:O	1:E:186:ILE:CD1	2.31	0.62
1:B:38:THR:N	1:B:99:TYR:CE2	2.68	0.62
1:D:102:PHE:CZ	1:D:106:ILE:HD11	2.34	0.62
1:A:39:LEU:HB2	1:A:99:TYR:CE2	2.35	0.62
1:B:127:THR:O	1:B:127:THR:CG2	2.47	0.62
1:E:40:TYR:HD2	1:E:70:ILE:HB	1.65	0.62
1:A:14:PHE:O	1:A:15:LEU:HB2	1.98	0.62
1:E:150:LEU:CA	1:E:153:GLN:HG2	2.30	0.62
1:F:54:GLU:C	1:F:56:GLY:H	2.01	0.62
1:A:10:THR:CG2	1:A:112:ILE:HD11	2.26	0.62
1:C:14:PHE:CD1	1:C:15:LEU:CD2	2.83	0.62
1:E:8:ASP:OD1	1:E:115:ARG:NH2	2.25	0.62
1:B:40:TYR:HB2	1:B:70:ILE:HB	1.82	0.62
1:E:56:GLY:O	1:E:57:LYS:CB	2.41	0.62
1:F:82:ARG:O	1:F:84:ALA:O	2.18	0.62
1:A:79:GLY:O	1:A:80:GLN:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:70:ILE:HG22	1:B:70:ILE:O	1.99	0.61
1:F:43:VAL:O	1:F:44:LYS:CG	2.48	0.61
1:F:114:MET:CE	1:F:114:MET:CA	2.75	0.61
1:D:111:ASP:OD2	1:D:115:ARG:NH1	2.34	0.61
1:F:43:VAL:HG12	1:F:44:LYS:HG3	1.82	0.61
1:C:63:TYR:HE1	1:C:89:LYS:HD2	1.65	0.61
1:F:117:SER:HB3	1:F:120:MET:HE1	1.81	0.61
1:A:28:THR:HG23	1:A:86:VAL:O	2.00	0.61
1:D:119:GLN:O	1:D:120:MET:C	2.37	0.61
1:E:123:ARG:O	1:E:126:VAL:CG1	2.36	0.61
1:F:21:HIS:O	1:F:93:GLU:HA	2.00	0.61
1:A:53:ASP:CG	1:A:54:GLU:H	2.01	0.61
1:F:114:MET:C	1:F:116:LEU:H	2.04	0.61
1:B:20:ILE:HD12	1:B:20:ILE:H	1.66	0.61
1:C:189:MET:O	1:C:193:GLN:HG2	2.00	0.61
1:E:37:GLU:C	1:E:38:THR:CG2	2.65	0.61
1:B:38:THR:C	1:B:99:TYR:HE2	2.05	0.61
1:B:196:ILE:C	1:B:196:ILE:HD12	2.21	0.61
1:D:122:ARG:HB3	1:D:122:ARG:CZ	2.31	0.61
1:B:51:ILE:CD1	1:B:59:MET:O	2.48	0.61
1:A:50:LEU:CD2	1:A:60:ILE:HA	2.30	0.60
1:B:31:HIS:HA	1:B:85:TRP:CD1	2.35	0.60
1:E:77:GLU:O	1:E:78:GLU:C	2.37	0.60
1:F:32:GLN:CB	1:F:83:SER:O	2.49	0.60
1:A:65:ASN:N	1:A:68:ASP:OD2	2.32	0.60
1:C:104:GLN:O	1:C:105:LEU:C	2.39	0.60
1:A:81:GLU:O	1:A:81:GLU:CG	2.49	0.60
1:A:112:ILE:CD1	1:A:112:ILE:N	2.64	0.60
1:C:14:PHE:O	1:C:17:HIS:HB2	2.01	0.60
1:F:121:ALA:O	1:F:124:LEU:N	2.34	0.60
1:B:51:ILE:HD12	1:B:61:LEU:CG	2.29	0.60
1:B:170:GLN:CB	1:B:180:ARG:HD3	2.25	0.60
1:F:124:LEU:C	1:F:126:VAL:N	2.52	0.60
1:F:102:PHE:CZ	1:F:106:ILE:HD11	2.37	0.60
1:A:14:PHE:HE2	1:A:102:PHE:CE1	2.19	0.60
1:A:81:GLU:CA	1:A:82:ARG:HB2	2.03	0.60
1:F:68:ASP:HA	1:F:119:GLN:HE22	0.44	0.60
1:F:122:ARG:O	1:F:124:LEU:N	2.30	0.60
1:B:70:ILE:CG2	1:B:70:ILE:O	2.49	0.60
1:B:113:LEU:O	1:B:117:SER:HB2	2.02	0.60
1:A:11:LEU:HB2	1:A:115:ARG:HH22	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:37:GLU:HG3	1:C:38:THR:H	1.65	0.60
1:E:28:THR:CA	1:E:87:ARG:HG3	2.31	0.60
1:A:77:GLU:HG2	1:A:77:GLU:O	2.00	0.60
1:B:165:ILE:CD1	1:B:203:ILE:HB	2.32	0.60
1:C:68:ASP:CA	1:C:119:GLN:OE1	2.41	0.60
1:F:204:VAL:CG1	1:F:205:VAL:N	2.65	0.60
1:C:65:ASN:O	1:C:66:GLN:C	2.40	0.59
1:F:40:TYR:HB3	1:F:94:VAL:HG11	1.82	0.59
1:F:51:ILE:O	1:F:59:MET:CB	2.47	0.59
1:B:118:ALA:O	1:B:120:MET:N	2.35	0.59
1:A:126:VAL:CG1	1:A:193:GLN:HE22	2.16	0.59
1:E:119:GLN:O	1:E:119:GLN:OE1	2.21	0.59
1:F:164:GLN:CD	1:F:202:THR:CG2	2.71	0.59
1:D:86:VAL:C	1:D:87:ARG:HG3	2.21	0.59
1:E:13:TRP:CZ3	1:E:109:ASN:HB3	2.36	0.59
1:F:39:LEU:HB2	1:F:99:TYR:CE2	2.37	0.59
1:D:70:ILE:CG2	1:D:71:GLY:H	2.16	0.59
1:D:51:ILE:CD1	1:D:59:MET:HB3	2.32	0.59
1:E:11:LEU:O	1:E:15:LEU:HD23	2.03	0.59
1:B:108:VAL:O	1:B:109:ASN:OD1	2.21	0.59
1:C:14:PHE:HD1	1:C:15:LEU:HD21	1.66	0.59
1:C:63:TYR:CE1	1:C:89:LYS:HD2	2.37	0.59
1:D:33:GLY:O	1:D:81:GLU:HG3	2.03	0.59
1:F:204:VAL:HG12	1:F:205:VAL:H	1.66	0.59
1:C:37:GLU:HA	1:C:99:TYR:HB2	1.85	0.59
1:D:124:LEU:O	1:D:127:THR:N	2.29	0.59
1:D:83:SER:C	1:D:84:ALA:O	2.38	0.59
1:E:65:ASN:O	1:E:68:ASP:OD2	2.20	0.59
1:F:14:PHE:CD1	1:F:14:PHE:O	2.56	0.59
1:B:38:THR:HG21	1:B:96:GLU:HB2	1.84	0.58
1:C:14:PHE:O	1:C:16:SER:N	2.36	0.58
1:C:14:PHE:CZ	1:C:112:ILE:HG21	2.38	0.58
1:E:33:GLY:HA2	1:E:81:GLU:HG3	1.84	0.58
1:E:38:THR:HA	1:E:99:TYR:CD2	2.38	0.58
1:A:106:ILE:CG2	1:A:113:LEU:HD22	2.33	0.58
1:C:198:ALA:HA	1:C:203:ILE:HD13	1.84	0.58
1:D:13:TRP:CZ3	1:D:112:ILE:CD1	2.86	0.58
1:E:162:GLY:CA	1:E:207:GLY:H	2.14	0.58
1:F:69:PHE:O	1:F:70:ILE:CG1	2.52	0.58
1:A:17:HIS:O	1:A:18:CYS:HB3	2.03	0.58
1:B:41:TYR:HD1	1:B:69:PHE:CE2	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:120:MET:O	1:B:124:LEU:N	2.37	0.58
1:D:51:ILE:HD12	1:D:59:MET:HB3	1.84	0.58
1:E:120:MET:SD	1:F:120:MET:CE	2.90	0.58
1:E:134:LEU:N	1:F:195:LEU:HD13	2.16	0.58
1:A:51:ILE:HG21	1:A:61:LEU:HD12	1.86	0.58
1:C:148:LEU:HD23	1:C:152:LYS:HE2	1.83	0.58
1:E:134:LEU:HD23	1:F:190:LEU:CD2	2.31	0.58
1:F:30:ILE:CG1	1:F:86:VAL:HB	2.21	0.58
1:A:80:GLN:HE21	1:A:80:GLN:H	1.51	0.58
1:C:32:GLN:HG3	1:C:84:ALA:H	1.67	0.58
1:D:42:ILE:HD11	1:D:70:ILE:HD11	1.85	0.58
1:F:123:ARG:N	1:F:123:ARG:HD3	2.13	0.58
1:F:157:MET:HB2	1:F:164:GLN:HB3	1.84	0.58
1:F:164:GLN:CG	1:F:202:THR:CG2	2.82	0.58
1:C:14:PHE:CD2	1:C:112:ILE:HG12	2.39	0.58
1:C:50:LEU:HD13	1:C:60:ILE:HD13	1.86	0.58
1:F:51:ILE:HD11	1:F:61:LEU:HB2	1.55	0.58
1:B:197:SER:OG	1:B:204:VAL:HB	2.03	0.58
1:A:11:LEU:O	1:A:11:LEU:CD2	2.51	0.58
1:A:57:LYS:O	1:A:58:GLU:C	2.42	0.58
1:A:75:LEU:O	1:A:103:ARG:NH1	2.36	0.58
1:B:33:GLY:O	1:B:81:GLU:HG2	2.04	0.58
1:B:79:GLY:O	1:B:80:GLN:C	2.41	0.57
1:B:167:ILE:HD13	1:B:172:ILE:CD1	2.34	0.57
1:C:112:ILE:HD12	1:C:112:ILE:N	2.18	0.57
1:D:122:ARG:NH2	1:D:122:ARG:HG3	2.09	0.57
1:F:10:THR:HG22	1:F:112:ILE:HD13	1.86	0.57
1:F:58:GLU:O	1:F:59:MET:O	2.22	0.57
1:F:122:ARG:C	1:F:124:LEU:N	2.55	0.57
1:E:25:SER:O	1:E:26:LYS:HD3	1.99	0.57
1:F:117:SER:CA	1:F:120:MET:HE2	2.34	0.57
1:F:164:GLN:CD	1:F:202:THR:HG21	2.25	0.57
1:F:51:ILE:HD11	1:F:61:LEU:HB3	1.79	0.57
1:C:103:ARG:HG3	1:C:103:ARG:NH2	2.16	0.57
1:F:90:THR:OG1	1:F:91:ALA:N	2.37	0.57
1:F:167:ILE:HD13	1:F:172:ILE:HD11	1.86	0.57
1:A:102:PHE:CE2	1:A:106:ILE:HD11	2.40	0.57
1:B:64:LEU:CD1	1:B:70:ILE:HD12	2.34	0.57
1:B:127:THR:O	1:B:128:SER:CB	2.52	0.57
1:C:40:TYR:HB3	1:C:70:ILE:HD13	1.85	0.57
1:C:167:ILE:HD13	1:C:172:ILE:CD1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:186:ILE:N	1:D:186:ILE:HD12	2.19	0.57
1:F:14:PHE:CD2	1:F:112:ILE:HG12	2.40	0.57
1:F:47:VAL:HG12	1:F:88:ALA:HA	1.87	0.57
1:A:11:LEU:HB2	1:A:115:ARG:NH2	2.20	0.57
1:D:102:PHE:O	1:D:106:ILE:HG12	2.05	0.57
1:C:114:MET:HA	1:C:114:MET:HE3	1.85	0.57
1:E:204:VAL:C	1:E:205:VAL:O	2.39	0.57
1:B:39:LEU:HD21	1:B:102:PHE:CD1	2.40	0.57
1:E:157:MET:HB2	1:E:164:GLN:HB3	1.87	0.57
1:E:202:THR:C	1:E:203:ILE:HD12	2.24	0.57
1:A:164:GLN:HA	1:A:204:VAL:HA	1.86	0.56
1:C:10:THR:O	1:C:13:TRP:CB	2.51	0.56
1:C:16:SER:O	1:C:17:HIS:CB	2.53	0.56
1:E:15:LEU:N	1:E:15:LEU:CD2	2.68	0.56
1:E:73:LEU:H	1:E:73:LEU:HD12	1.70	0.56
1:A:164:GLN:CG	1:A:204:VAL:HG22	2.34	0.56
1:B:20:ILE:HD12	1:B:20:ILE:N	2.20	0.56
1:B:31:HIS:HA	1:B:85:TRP:HD1	1.69	0.56
1:D:28:THR:HA	1:D:87:ARG:HG2	1.88	0.56
1:E:86:VAL:HG12	1:E:86:VAL:O	2.06	0.56
1:E:134:LEU:HD11	1:F:195:LEU:HB2	1.85	0.56
1:F:122:ARG:CG	1:F:122:ARG:NH2	2.41	0.56
1:B:167:ILE:HD13	1:B:172:ILE:HD13	1.87	0.56
1:E:38:THR:HA	1:E:39:LEU:HB2	1.77	0.56
1:D:54:GLU:O	1:D:55:GLU:CB	2.39	0.56
1:D:112:ILE:H	1:D:112:ILE:CD1	2.19	0.56
1:E:20:ILE:H	1:E:20:ILE:CD1	2.13	0.56
1:E:53:ASP:OD2	1:E:59:MET:HE3	2.04	0.56
1:F:32:GLN:NE2	1:F:85:TRP:CH2	2.63	0.56
1:F:165:ILE:N	1:F:203:ILE:O	2.38	0.56
1:C:21:HIS:HB2	1:C:23:TYR:CE2	2.41	0.56
1:A:163:MET:O	1:A:205:VAL:N	2.34	0.56
1:B:112:ILE:HG23	1:B:113:LEU:H	1.70	0.56
1:C:78:GLU:HG2	1:C:103:ARG:HH12	1.71	0.56
1:E:22:LYS:HG2	1:E:93:GLU:HG2	1.86	0.56
1:E:38:THR:HA	1:E:99:TYR:CE2	2.41	0.56
1:E:197:SER:HG	1:E:204:VAL:CG1	2.13	0.56
1:F:123:ARG:CG	1:F:123:ARG:NH1	2.30	0.56
1:E:14:PHE:CE1	1:E:18:CYS:SG	2.99	0.56
1:F:39:LEU:HD12	1:F:71:GLY:CA	2.36	0.56
1:F:165:ILE:HD11	1:F:203:ILE:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:15:LEU:HD23	1:E:15:LEU:N	2.20	0.56
1:E:124:LEU:CD2	1:E:127:THR:HG21	2.36	0.56
1:B:36:ALA:CB	1:B:82:ARG:CZ	2.84	0.55
1:C:41:TYR:CE2	1:C:42:ILE:O	2.60	0.55
1:A:8:ASP:OD1	1:A:11:LEU:HB2	2.05	0.55
1:E:15:LEU:O	1:E:18:CYS:N	2.36	0.55
1:F:110:PRO:O	1:F:113:LEU:N	2.38	0.55
1:C:35:LYS:C	1:C:36:ALA:O	2.44	0.55
1:C:170:GLN:NE2	1:C:171:GLU:HG3	2.22	0.55
1:F:39:LEU:HB2	1:F:99:TYR:CD2	2.42	0.55
1:A:168:THR:HG22	1:A:201:LYS:HG3	1.88	0.55
1:B:120:MET:O	1:B:123:ARG:CA	2.54	0.55
1:D:114:MET:HE3	1:D:114:MET:N	2.22	0.55
1:F:42:ILE:HG22	1:F:66:GLN:HA	1.88	0.55
1:E:205:VAL:HG12	1:E:206:TYR:O	2.07	0.55
1:A:13:TRP:HZ2	1:A:108:VAL:HG11	1.71	0.55
1:A:49:VAL:O	1:A:61:LEU:CB	2.55	0.55
1:C:30:ILE:CD1	1:C:86:VAL:CG2	2.78	0.55
1:D:38:THR:HG23	1:D:97:ILE:O	2.07	0.55
1:A:30:ILE:CD1	1:A:40:TYR:CZ	2.90	0.55
1:B:37:GLU:C	1:B:99:TYR:CD2	2.80	0.55
1:B:38:THR:C	1:B:99:TYR:CE2	2.80	0.55
1:E:37:GLU:O	1:E:38:THR:CB	2.54	0.55
1:F:204:VAL:CG1	1:F:205:VAL:H	2.20	0.55
1:B:40:TYR:CG	1:B:70:ILE:HG22	2.39	0.55
1:E:18:CYS:SG	1:E:97:ILE:HB	2.47	0.55
1:E:186:ILE:HD12	1:E:186:ILE:N	2.22	0.55
1:A:72:GLU:HG2	1:A:73:LEU:HD12	1.87	0.54
1:A:55:GLU:OE1	1:A:57:LYS:HE3	2.06	0.54
1:B:82:ARG:O	1:B:84:ALA:N	2.40	0.54
1:C:44:LYS:O	1:C:92:CYS:HB2	2.06	0.54
1:A:51:ILE:CG2	1:A:61:LEU:HD12	2.37	0.54
1:A:97:ILE:HD11	1:A:101:LYS:CE	2.37	0.54
1:A:157:MET:HB2	1:A:164:GLN:HB3	1.89	0.54
1:C:17:HIS:O	1:C:97:ILE:CD1	2.55	0.54
1:C:69:PHE:H	1:C:119:GLN:NE2	2.05	0.54
1:D:30:ILE:HD12	1:D:86:VAL:HG21	1.89	0.54
1:B:41:TYR:CE1	1:B:69:PHE:CE2	2.96	0.54
1:D:77:GLU:OE1	1:D:80:GLN:OE1	2.26	0.54
1:E:39:LEU:N	1:E:99:TYR:HE2	2.06	0.54
1:E:69:PHE:H	1:E:119:GLN:NE2	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:117:SER:HA	1:E:120:MET:HE1	1.72	0.54
1:E:138:ASP:HA	1:F:141:GLY:CA	2.37	0.54
1:F:46:SER:N	1:F:90:THR:CG2	2.68	0.54
1:C:167:ILE:HD13	1:C:172:ILE:HD13	1.90	0.54
1:D:22:LYS:HG2	1:D:93:GLU:HG2	1.90	0.54
1:F:33:GLY:O	1:F:81:GLU:HG3	2.07	0.54
1:A:18:CYS:HB2	1:A:96:GLU:O	2.08	0.54
1:A:70:ILE:HG22	1:A:71:GLY:N	2.23	0.54
1:B:85:TRP:HE3	1:B:85:TRP:N	2.02	0.54
1:B:170:GLN:HA	1:B:180:ARG:HG2	1.89	0.54
1:D:149:ASN:O	1:D:153:GLN:CG	2.36	0.54
1:E:16:SER:O	1:E:17:HIS:ND1	2.41	0.54
1:A:25:SER:O	1:A:26:LYS:HB2	2.07	0.53
1:D:13:TRP:CZ3	1:D:112:ILE:HD13	2.43	0.53
1:D:30:ILE:HG21	1:D:82:ARG:HD2	1.90	0.53
1:E:77:GLU:OE1	1:E:80:GLN:CD	2.46	0.53
1:F:43:VAL:CG1	1:F:93:GLU:OE2	2.56	0.53
1:C:21:HIS:HB2	1:C:23:TYR:OH	2.08	0.53
1:A:50:LEU:HD23	1:A:60:ILE:HA	1.91	0.53
1:B:38:THR:HA	1:B:39:LEU:HB3	1.89	0.53
1:F:20:ILE:N	1:F:20:ILE:CD1	2.69	0.53
1:F:37:GLU:HA	1:F:99:TYR:CD1	2.44	0.53
1:A:10:THR:HG21	1:A:111:ASP:OD2	2.09	0.53
1:A:53:ASP:CG	1:A:54:GLU:N	2.58	0.53
1:C:32:GLN:HE21	1:C:84:ALA:HA	1.73	0.53
1:D:38:THR:HA	1:D:39:LEU:HB3	1.91	0.53
1:E:114:MET:HA	1:E:114:MET:CE	2.38	0.53
1:A:82:ARG:O	1:A:82:ARG:CD	2.57	0.53
1:A:106:ILE:HD12	1:A:113:LEU:HB2	1.90	0.53
1:F:32:GLN:CG	1:F:83:SER:O	2.57	0.53
1:C:41:TYR:CB	1:C:69:PHE:CD1	2.86	0.53
1:F:46:SER:H	1:F:90:THR:HG23	1.71	0.53
1:D:83:SER:O	1:D:84:ALA:C	2.41	0.53
1:E:44:LYS:O	1:E:92:CYS:HB2	2.09	0.53
1:E:38:THR:C	1:E:99:TYR:CE2	2.83	0.53
1:C:30:ILE:O	1:C:31:HIS:ND1	2.42	0.52
1:D:182:THR:O	1:D:186:ILE:CD1	2.38	0.52
1:F:75:LEU:HD13	1:F:103:ARG:CZ	2.39	0.52
1:B:114:MET:HA	1:B:114:MET:CE	2.40	0.52
1:D:32:GLN:OE1	1:D:85:TRP:HE3	1.90	0.52
1:E:14:PHE:CD2	1:E:112:ILE:HD13	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:17:HIS:O	1:A:18:CYS:CB	2.57	0.52
1:A:75:LEU:N	1:A:99:TYR:CZ	2.77	0.52
1:F:13:TRP:CE3	1:F:14:PHE:CA	2.93	0.52
1:B:22:LYS:HG2	1:B:93:GLU:HG2	1.90	0.52
1:F:25:SER:O	1:F:26:LYS:HB2	2.10	0.52
1:F:71:GLY:O	1:F:72:GLU:HB3	2.09	0.52
1:A:150:LEU:HA	1:A:153:GLN:HG2	1.92	0.52
1:C:50:LEU:CD1	1:C:60:ILE:HD13	2.40	0.52
1:C:70:ILE:O	1:C:71:GLY:C	2.48	0.52
1:E:111:ASP:O	1:E:114:MET:HB2	2.09	0.52
1:F:41:TYR:CD2	1:F:41:TYR:C	2.82	0.52
1:B:30:ILE:CD1	1:B:40:TYR:HE2	2.20	0.52
1:D:13:TRP:CE3	1:D:112:ILE:HD11	2.45	0.52
1:D:14:PHE:HB2	1:D:112:ILE:HG12	1.91	0.52
1:E:39:LEU:CA	1:E:99:TYR:HE2	2.23	0.52
1:E:83:SER:O	1:E:84:ALA:O	2.26	0.52
1:C:80:GLN:HE21	1:C:81:GLU:N	2.08	0.52
1:E:30:ILE:HG22	1:E:82:ARG:HD2	1.90	0.52
1:E:134:LEU:HG	1:F:195:LEU:CB	2.40	0.52
1:F:114:MET:C	1:F:116:LEU:N	2.63	0.52
1:A:42:ILE:HD12	1:A:68:ASP:HB2	1.92	0.52
1:C:30:ILE:O	1:C:31:HIS:CD2	2.63	0.52
1:E:38:THR:N	1:E:99:TYR:CE2	2.75	0.52
1:A:106:ILE:HG21	1:A:113:LEU:HD22	1.92	0.51
1:B:120:MET:CA	1:B:123:ARG:HB2	2.39	0.51
1:E:181:GLU:HG2	1:F:53:ASP:OD1	2.11	0.51
1:A:114:MET:HE2	1:B:76:PHE:HE1	1.75	0.51
1:B:38:THR:HA	1:B:39:LEU:CB	2.40	0.51
1:D:29:LEU:HD21	1:D:94:VAL:HG21	1.91	0.51
1:E:8:ASP:HB3	1:E:11:LEU:HB2	1.92	0.51
1:F:38:THR:HG23	1:F:97:ILE:O	2.10	0.51
1:F:65:ASN:CG	1:F:66:GLN:H	2.13	0.51
1:A:15:LEU:CD1	1:A:20:ILE:HD11	2.40	0.51
1:F:117:SER:HA	1:F:120:MET:HE2	1.92	0.51
1:B:73:LEU:O	1:B:80:GLN:NE2	2.43	0.51
1:D:97:ILE:HD11	1:D:101:LYS:HG2	1.92	0.51
1:E:38:THR:CA	1:E:99:TYR:HE2	2.23	0.51
1:B:30:ILE:HG21	1:B:82:ARG:HD3	1.87	0.51
1:B:125:GLN:O	1:B:129:GLU:OE2	2.29	0.51
1:F:75:LEU:CD1	1:F:103:ARG:NE	2.74	0.51
1:C:37:GLU:O	1:C:38:THR:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:121:ALA:O	1:F:122:ARG:C	2.49	0.51
1:A:112:ILE:CD1	1:A:112:ILE:H	2.24	0.51
1:B:39:LEU:HB2	1:B:99:TYR:HE2	1.75	0.51
1:C:98:SER:C	1:C:100:LYS:N	2.42	0.51
1:E:205:VAL:CG1	1:E:206:TYR:N	2.14	0.51
1:A:10:THR:HG21	1:A:111:ASP:HB3	1.93	0.51
1:A:62:SER:HG	1:A:63:TYR:H	1.57	0.51
1:D:136:PHE:CE1	1:D:186:ILE:HD11	2.46	0.51
1:E:8:ASP:CG	1:E:115:ARG:HH12	2.14	0.51
1:E:38:THR:HG22	1:E:98:SER:HA	1.93	0.51
1:E:150:LEU:O	1:E:153:GLN:CB	2.59	0.51
1:F:15:LEU:C	1:F:17:HIS:N	2.62	0.51
1:F:167:ILE:HD13	1:F:172:ILE:HD13	1.93	0.51
1:B:36:ALA:HB1	1:B:82:ARG:NH1	2.26	0.51
1:E:168:THR:HG22	1:E:201:LYS:HG3	1.93	0.51
1:F:122:ARG:CG	1:F:123:ARG:N	2.72	0.51
1:C:30:ILE:CD1	1:C:86:VAL:HG21	2.39	0.50
1:C:75:LEU:HA	1:C:99:TYR:CE1	2.45	0.50
1:D:50:LEU:CD1	1:D:60:ILE:HG12	2.41	0.50
1:B:116:LEU:O	1:B:117:SER:C	2.48	0.50
1:C:14:PHE:C	1:C:16:SER:N	2.64	0.50
1:E:52:LYS:HA	1:E:57:LYS:O	2.11	0.50
1:C:21:HIS:HB2	1:C:23:TYR:CZ	2.46	0.50
1:F:41:TYR:C	1:F:94:VAL:HG13	2.31	0.50
1:B:40:TYR:HD2	1:B:70:ILE:HG22	1.54	0.50
1:B:112:ILE:CD1	1:B:112:ILE:CG1	2.90	0.50
1:C:39:LEU:O	1:C:40:TYR:O	2.30	0.50
1:B:39:LEU:HB2	1:B:99:TYR:CD2	2.46	0.50
1:C:14:PHE:CE2	1:C:112:ILE:HG12	2.47	0.50
1:C:25:SER:C	1:C:27:SER:H	2.14	0.50
1:C:50:LEU:CD2	1:C:87:ARG:HD3	2.39	0.50
1:E:204:VAL:O	1:E:205:VAL:O	2.30	0.50
1:C:114:MET:HE3	1:D:113:LEU:HD21	1.92	0.50
1:F:68:ASP:CA	1:F:119:GLN:HE21	2.09	0.50
1:C:72:GLU:O	1:C:74:GLY:N	2.43	0.50
1:D:69:PHE:HD2	1:D:119:GLN:OE1	1.95	0.50
1:E:30:ILE:HD11	1:E:40:TYR:CE2	2.47	0.50
1:E:148:LEU:HD23	1:E:152:LYS:HE2	1.94	0.50
1:E:203:ILE:HD12	1:E:203:ILE:N	2.27	0.50
1:A:76:PHE:HE1	1:B:114:MET:CE	2.24	0.50
1:A:164:GLN:HG3	1:A:204:VAL:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:79:GLY:O	1:B:80:GLN:O	2.30	0.50
1:B:109:ASN:C	1:B:111:ASP:H	2.16	0.50
1:B:116:LEU:HD21	1:B:120:MET:CE	2.41	0.50
1:D:32:GLN:OE1	1:D:85:TRP:CZ3	2.62	0.50
1:F:74:GLY:O	1:F:75:LEU:O	2.29	0.50
1:F:126:VAL:C	1:F:128:SER:H	2.15	0.50
1:A:29:LEU:HD21	1:A:94:VAL:HG21	1.94	0.50
1:E:38:THR:C	1:E:99:TYR:HE2	2.14	0.50
1:E:42:ILE:N	1:E:68:ASP:O	2.39	0.50
1:E:65:ASN:O	1:E:68:ASP:CG	2.49	0.50
1:F:45:GLY:HA3	1:F:92:CYS:HB3	1.94	0.50
1:B:21:HIS:CE1	1:B:23:TYR:CE2	3.00	0.49
1:C:101:LYS:O	1:C:104:GLN:HB2	2.12	0.49
1:D:139:VAL:HG13	1:D:176:VAL:HG11	1.93	0.49
1:F:60:ILE:CG2	1:F:61:LEU:N	2.40	0.49
1:F:75:LEU:HD13	1:F:103:ARG:NH1	2.27	0.49
1:D:124:LEU:O	1:D:125:GLN:C	2.49	0.49
1:E:46:SER:CA	1:E:90:THR:CG2	2.90	0.49
1:F:13:TRP:O	1:F:15:LEU:N	2.45	0.49
1:F:54:GLU:C	1:F:56:GLY:N	2.62	0.49
1:B:78:GLU:O	1:B:80:GLN:N	2.36	0.49
1:B:168:THR:OG1	1:B:170:GLN:HG3	2.12	0.49
1:C:33:GLY:O	1:C:81:GLU:O	2.29	0.49
1:C:40:TYR:HB2	1:C:70:ILE:HB	1.93	0.49
1:D:14:PHE:CD2	1:D:112:ILE:HG21	2.48	0.49
1:F:43:VAL:CB	1:F:93:GLU:OE2	2.58	0.49
1:A:25:SER:HB2	1:A:89:LYS:O	2.13	0.49
1:A:82:ARG:O	1:A:83:SER:O	2.30	0.49
1:C:30:ILE:HB	1:C:86:VAL:HB	1.94	0.49
1:D:150:LEU:HA	1:D:153:GLN:HG3	1.94	0.49
1:A:41:TYR:HD1	1:A:69:PHE:CE1	2.30	0.49
1:D:70:ILE:HG22	1:D:71:GLY:H	1.75	0.49
1:F:47:VAL:HA	1:F:89:LYS:H	1.78	0.49
1:F:117:SER:CB	1:F:120:MET:CE	2.90	0.49
1:B:39:LEU:N	1:B:99:TYR:HE2	2.11	0.49
1:B:43:VAL:O	1:B:66:GLN:HG3	2.12	0.49
1:E:127:THR:HG22	1:E:128:SER:N	1.94	0.49
1:E:163:MET:O	1:E:205:VAL:N	2.46	0.49
1:F:32:GLN:HB2	1:F:85:TRP:CE3	2.48	0.49
1:C:112:ILE:H	1:C:112:ILE:CD1	2.25	0.49
1:D:112:ILE:N	1:D:112:ILE:CD1	2.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:149:ASN:O	1:E:153:GLN:HG2	2.13	0.49
1:B:120:MET:O	1:B:123:ARG:CB	2.58	0.49
1:C:10:THR:HG21	1:C:111:ASP:CB	2.43	0.49
1:E:76:PHE:HE2	1:F:114:MET:HE2	1.78	0.49
1:C:8:ASP:OD1	1:C:115:ARG:NH2	2.46	0.49
1:A:14:PHE:HE2	1:A:102:PHE:HE1	1.59	0.48
1:D:150:LEU:HA	1:D:153:GLN:HG2	1.95	0.48
1:A:60:ILE:HG23	1:A:61:LEU:H	1.75	0.48
1:B:124:LEU:C	1:B:126:VAL:H	2.17	0.48
1:D:10:THR:HG23	1:D:112:ILE:CD1	2.44	0.48
1:F:38:THR:HG21	1:F:96:GLU:HB2	1.94	0.48
1:F:126:VAL:HG13	1:F:192:ASP:HB3	1.95	0.48
1:B:82:ARG:O	1:B:83:SER:C	2.51	0.48
1:E:139:VAL:HG13	1:E:176:VAL:HG11	1.96	0.48
1:F:19:HIS:O	1:F:96:GLU:N	2.45	0.48
1:A:8:ASP:OD2	1:A:115:ARG:NH1	2.41	0.48
1:C:37:GLU:HA	1:C:99:TYR:CG	2.47	0.48
1:D:51:ILE:HD12	1:D:51:ILE:C	2.33	0.48
1:F:114:MET:HE3	1:F:114:MET:CA	2.40	0.48
1:F:151:ALA:HA	1:F:165:ILE:HG23	1.95	0.48
1:B:51:ILE:HG22	1:B:84:ALA:HB2	1.95	0.48
1:D:86:VAL:HG12	1:D:87:ARG:N	2.27	0.48
1:F:38:THR:HA	1:F:39:LEU:CB	2.43	0.48
1:F:44:LYS:O	1:F:92:CYS:HB2	2.13	0.48
1:B:120:MET:HA	1:B:123:ARG:HB2	1.95	0.48
1:E:136:PHE:CE1	1:E:186:ILE:HD11	2.48	0.48
1:F:43:VAL:O	1:F:44:LYS:HG3	2.13	0.48
1:A:121:ALA:HB1	1:B:73:LEU:HG	1.95	0.48
1:F:28:THR:CG2	1:F:31:HIS:CE1	2.96	0.48
1:F:114:MET:HE2	1:F:114:MET:CA	2.43	0.48
1:A:76:PHE:CD2	1:A:76:PHE:N	2.80	0.48
1:C:75:LEU:O	1:C:103:ARG:NH1	2.47	0.48
1:D:119:GLN:O	1:D:121:ALA:N	2.47	0.48
1:F:94:VAL:HG12	1:F:95:ALA:H	1.74	0.48
1:A:75:LEU:CD1	1:A:99:TYR:CD2	2.96	0.48
1:C:80:GLN:HE21	1:C:81:GLU:H	1.61	0.48
1:E:197:SER:HG	1:E:204:VAL:HG11	1.76	0.48
1:F:15:LEU:O	1:F:16:SER:C	2.51	0.48
1:C:150:LEU:HD23	1:C:153:GLN:HG3	1.96	0.47
1:E:38:THR:CA	1:E:39:LEU:HB3	2.26	0.47
1:A:29:LEU:O	1:A:30:ILE:HD13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:40:TYR:HB2	1:A:70:ILE:CG1	2.44	0.47
1:A:97:ILE:CD1	1:A:101:LYS:HE3	2.42	0.47
1:C:106:ILE:HD13	1:C:113:LEU:HD22	1.94	0.47
1:A:39:LEU:HB2	1:A:99:TYR:HE2	1.79	0.47
1:A:50:LEU:HD22	1:A:60:ILE:HA	1.95	0.47
1:B:29:LEU:HD21	1:B:94:VAL:HG21	1.94	0.47
1:E:53:ASP:CG	1:E:59:MET:CE	2.83	0.47
1:F:13:TRP:CZ3	1:F:14:PHE:HB2	2.49	0.47
1:F:43:VAL:O	1:F:44:LYS:HG2	2.12	0.47
1:A:23:TYR:O	1:A:91:ALA:HA	2.13	0.47
1:C:23:TYR:CD1	1:C:29:LEU:HD22	2.42	0.47
1:C:69:PHE:CE2	1:C:116:LEU:HB2	2.49	0.47
1:D:136:PHE:HE1	1:D:186:ILE:HD11	1.78	0.47
1:A:106:ILE:HG23	1:A:113:LEU:HD22	1.96	0.47
1:B:117:SER:O	1:B:118:ALA:O	2.33	0.47
1:C:102:PHE:O	1:C:102:PHE:CG	2.21	0.47
1:D:70:ILE:O	1:D:71:GLY:C	2.53	0.47
1:D:73:LEU:HD12	1:D:73:LEU:H	1.78	0.47
1:F:15:LEU:O	1:F:17:HIS:N	2.47	0.47
1:F:30:ILE:CG1	1:F:86:VAL:CB	2.88	0.47
1:A:55:GLU:HG3	1:A:56:GLY:O	2.14	0.47
1:B:82:ARG:HH21	1:B:82:ARG:CG	2.28	0.47
1:B:112:ILE:HG23	1:B:113:LEU:N	2.29	0.47
1:C:72:GLU:C	1:C:74:GLY:N	2.67	0.47
1:D:38:THR:HA	1:D:39:LEU:CB	2.44	0.47
1:F:94:VAL:CG1	1:F:95:ALA:N	2.76	0.47
1:A:78:GLU:OE2	1:A:78:GLU:HA	2.15	0.47
1:A:81:GLU:CB	1:A:82:ARG:HB3	2.41	0.47
1:D:11:LEU:O	1:D:15:LEU:HG	2.15	0.47
1:F:32:GLN:HB2	1:F:85:TRP:CZ3	2.49	0.47
1:F:39:LEU:HD12	1:F:39:LEU:HA	1.46	0.47
1:E:117:SER:N	1:E:120:MET:CE	2.78	0.47
1:E:205:VAL:O	1:E:206:TYR:CD2	2.67	0.47
1:F:43:VAL:HG12	1:F:93:GLU:OE2	2.15	0.47
1:A:102:PHE:CZ	1:A:106:ILE:HD11	2.50	0.47
1:C:168:THR:HG22	1:C:201:LYS:HG3	1.96	0.47
1:D:23:TYR:O	1:D:91:ALA:HA	2.15	0.47
1:E:45:GLY:HA3	1:E:92:CYS:HB3	1.97	0.47
1:C:30:ILE:HB	1:C:86:VAL:N	2.30	0.47
1:D:25:SER:O	1:D:26:LYS:HB2	2.15	0.47
1:E:136:PHE:HE1	1:E:186:ILE:HD11	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:189:MET:HG3	1:F:193:GLN:HE21	1.80	0.47
1:A:97:ILE:HD11	1:A:101:LYS:HG2	1.97	0.46
1:D:13:TRP:HZ3	1:D:112:ILE:HD13	1.81	0.46
1:F:28:THR:HG21	1:F:31:HIS:CE1	2.50	0.46
1:A:30:ILE:HD12	1:A:40:TYR:OH	2.15	0.46
1:B:36:ALA:HB1	1:B:82:ARG:HH12	1.80	0.46
1:B:69:PHE:N	1:B:69:PHE:CD2	2.83	0.46
1:C:37:GLU:O	1:C:38:THR:OG1	2.29	0.46
1:C:37:GLU:CG	1:C:38:THR:N	2.78	0.46
1:F:117:SER:HB3	1:F:120:MET:HE2	1.98	0.46
1:F:124:LEU:O	1:F:126:VAL:CA	2.60	0.46
1:C:111:ASP:O	1:C:114:MET:HB2	2.16	0.46
1:E:114:MET:HA	1:E:114:MET:HE3	1.97	0.46
1:E:124:LEU:HD22	1:E:127:THR:HG21	1.97	0.46
1:B:122:ARG:O	1:B:126:VAL:CG2	2.59	0.46
1:C:40:TYR:C	1:C:70:ILE:HD12	2.36	0.46
1:D:99:TYR:O	1:D:103:ARG:HG3	2.16	0.46
1:A:13:TRP:O	1:A:15:LEU:N	2.48	0.46
1:A:170:GLN:HB3	1:A:180:ARG:HH21	1.79	0.46
1:C:20:ILE:H	1:C:20:ILE:CD1	2.28	0.46
1:E:36:ALA:C	1:E:37:GLU:HG3	2.36	0.46
1:E:162:GLY:CA	1:E:207:GLY:N	2.69	0.46
1:B:64:LEU:HD13	1:B:70:ILE:CD1	2.45	0.46
1:B:119:GLN:CG	1:B:120:MET:H	2.06	0.46
1:E:126:VAL:CG1	1:E:127:THR:N	2.37	0.46
1:E:122:ARG:HA	1:E:125:GLN:HB2	1.97	0.46
1:A:76:PHE:HE1	1:B:114:MET:HE1	1.80	0.46
1:B:165:ILE:C	1:B:165:ILE:HD12	2.36	0.46
1:C:67:GLY:O	1:C:119:GLN:OE1	2.34	0.46
1:F:70:ILE:HA	1:F:71:GLY:O	2.15	0.46
1:A:102:PHE:O	1:A:106:ILE:HG12	2.16	0.46
1:E:42:ILE:CD1	1:E:68:ASP:HB2	2.38	0.46
1:E:150:LEU:C	1:E:153:GLN:HG2	2.35	0.46
1:F:97:ILE:CD1	1:F:101:LYS:HE3	2.44	0.46
1:A:76:PHE:CE1	1:B:114:MET:HE1	2.51	0.45
1:A:175:ILE:HD12	1:A:175:ILE:N	2.31	0.45
1:B:142:ARG:HD2	1:B:176:VAL:HG13	1.98	0.45
1:C:7:THR:O	1:C:9:PRO:HD3	2.16	0.45
1:D:30:ILE:CG2	1:D:82:ARG:HD2	2.46	0.45
1:D:64:LEU:HD13	1:D:70:ILE:HG12	1.98	0.45
1:B:39:LEU:HD21	1:B:102:PHE:CG	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:82:ARG:HH21	1:B:82:ARG:HG3	1.81	0.45
1:B:106:ILE:HD13	1:B:113:LEU:HD22	1.98	0.45
1:E:38:THR:N	1:E:99:TYR:HD2	2.04	0.45
1:F:126:VAL:CG1	1:F:193:GLN:NE2	2.69	0.45
1:F:195:LEU:N	1:F:206:TYR:CE1	2.84	0.45
1:A:80:GLN:O	1:A:82:ARG:HA	2.17	0.45
1:C:14:PHE:CD1	1:C:15:LEU:HD21	2.47	0.45
1:C:39:LEU:HD13	1:C:99:TYR:CE2	2.51	0.45
1:A:44:LYS:O	1:A:92:CYS:HB2	2.16	0.45
1:B:40:TYR:O	1:B:70:ILE:N	2.49	0.45
1:B:196:ILE:HD12	1:B:197:SER:N	2.31	0.45
1:F:164:GLN:CG	1:F:202:THR:HG23	2.46	0.45
1:A:8:ASP:CG	1:A:11:LEU:HB2	2.37	0.45
1:C:39:LEU:HA	1:C:39:LEU:HD12	1.30	0.45
1:D:82:ARG:O	1:D:83:SER:C	2.55	0.45
1:D:122:ARG:CG	1:D:122:ARG:NH2	2.40	0.45
1:E:12:GLU:OE1	1:E:12:GLU:HA	2.17	0.45
1:E:73:LEU:HD23	1:F:125:GLN:HG3	1.98	0.45
1:C:16:SER:O	1:C:16:SER:OG	2.28	0.45
1:C:18:CYS:HB3	1:C:97:ILE:HB	1.98	0.45
1:C:139:VAL:HG13	1:C:176:VAL:HG11	1.99	0.45
1:C:170:GLN:HB3	1:C:180:ARG:HH21	1.81	0.45
1:E:51:ILE:HD11	1:E:59:MET:HB3	1.93	0.45
1:A:128:SER:O	1:B:61:LEU:HD22	2.17	0.45
1:B:10:THR:HG21	1:B:111:ASP:HB3	1.98	0.45
1:B:64:LEU:CD1	1:B:70:ILE:HD11	2.22	0.45
1:C:69:PHE:CD2	1:C:116:LEU:CB	3.00	0.45
1:D:50:LEU:HD11	1:D:60:ILE:HG12	1.99	0.45
1:E:38:THR:O	1:E:82:ARG:NH1	2.48	0.45
1:F:18:CYS:HB3	1:F:97:ILE:HB	1.99	0.45
1:F:97:ILE:HD11	1:F:101:LYS:CE	2.44	0.45
1:F:117:SER:CB	1:F:120:MET:HE1	2.46	0.45
1:A:143:ILE:HD12	1:A:186:ILE:HD12	1.99	0.45
1:B:25:SER:O	1:B:26:LYS:HB2	2.17	0.45
1:E:181:GLU:HG2	1:F:54:GLU:OE1	2.17	0.45
1:B:97:ILE:O	1:B:98:SER:C	2.54	0.45
1:E:10:THR:HG22	1:E:112:ILE:HG12	1.98	0.45
1:D:70:ILE:C	1:D:72:GLU:N	2.70	0.45
1:F:139:VAL:HG13	1:F:176:VAL:HG11	1.98	0.45
1:A:15:LEU:HD11	1:A:20:ILE:CD1	2.46	0.44
1:C:69:PHE:O	1:C:72:GLU:OE1	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:14:PHE:CZ	1:E:97:ILE:HG21	2.52	0.44
1:E:31:HIS:CD2	1:E:34:GLU:OE1	2.65	0.44
1:E:127:THR:HG23	1:E:128:SER:CA	2.40	0.44
1:F:123:ARG:O	1:F:124:LEU:HD22	2.14	0.44
1:B:78:GLU:C	1:B:80:GLN:H	2.19	0.44
1:C:69:PHE:HB2	1:C:119:GLN:HE22	1.82	0.44
1:E:123:ARG:O	1:E:126:VAL:N	2.49	0.44
1:A:35:LYS:CA	1:A:81:GLU:HB2	2.34	0.44
1:C:51:ILE:C	1:C:51:ILE:HD12	2.37	0.44
1:D:119:GLN:O	1:D:122:ARG:N	2.50	0.44
1:F:164:GLN:OE1	1:F:202:THR:CG2	2.61	0.44
1:A:126:VAL:HG13	1:A:193:GLN:HE22	1.81	0.44
1:F:21:HIS:O	1:F:93:GLU:CA	2.64	0.44
1:F:165:ILE:HD12	1:F:165:ILE:C	2.38	0.44
1:E:36:ALA:O	1:E:37:GLU:HG3	2.16	0.44
1:F:164:GLN:HG2	1:F:202:THR:HG23	1.99	0.44
1:A:8:ASP:OD1	1:A:11:LEU:CB	2.65	0.44
1:B:10:THR:O	1:B:11:LEU:C	2.56	0.44
1:E:117:SER:N	1:E:120:MET:HE2	2.32	0.44
1:A:39:LEU:HD12	1:A:39:LEU:HA	1.71	0.44
1:C:41:TYR:CG	1:C:69:PHE:CE1	2.82	0.44
1:E:124:LEU:HD23	1:E:127:THR:HG21	1.99	0.44
1:E:164:GLN:HG3	1:E:204:VAL:CB	2.43	0.44
1:F:13:TRP:CE3	1:F:14:PHE:HB2	2.52	0.44
1:F:19:HIS:O	1:F:95:ALA:CA	2.60	0.44
1:A:15:LEU:HD11	1:A:20:ILE:HD11	2.00	0.43
1:B:51:ILE:CG2	1:B:84:ALA:CB	2.95	0.43
1:D:38:THR:HB	1:D:40:TYR:CE2	2.53	0.43
1:E:186:ILE:CD1	1:E:186:ILE:N	2.81	0.43
1:F:53:ASP:OD2	1:F:53:ASP:C	2.56	0.43
1:A:40:TYR:HB3	1:A:94:VAL:CG1	2.48	0.43
1:C:14:PHE:HE2	1:C:112:ILE:HG21	1.77	0.43
1:C:37:GLU:HG3	1:C:38:THR:N	2.30	0.43
1:A:34:GLU:HB2	1:A:82:ARG:HG2	1.99	0.43
1:B:32:GLN:O	1:B:32:GLN:HG3	2.15	0.43
1:B:64:LEU:HD13	1:B:70:ILE:HD12	1.99	0.43
1:C:69:PHE:CD2	1:C:116:LEU:CA	3.00	0.43
1:C:72:GLU:O	1:C:73:LEU:C	2.56	0.43
1:C:85:TRP:HE3	1:C:85:TRP:H	1.67	0.43
1:C:117:SER:HA	1:C:120:MET:HE2	1.99	0.43
1:E:127:THR:HA	1:E:130:LYS:HE2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:150:LEU:O	1:E:153:GLN:CG	2.66	0.43
1:F:124:LEU:O	1:F:126:VAL:C	2.56	0.43
1:F:195:LEU:C	1:F:206:TYR:CD1	2.91	0.43
1:C:8:ASP:HA	1:C:9:PRO:HD3	1.77	0.43
1:C:14:PHE:CB	1:C:15:LEU:CD2	2.73	0.43
1:E:14:PHE:HB2	1:E:112:ILE:CD1	2.48	0.43
1:F:41:TYR:CD2	1:F:69:PHE:CD1	3.06	0.43
1:A:50:LEU:HD21	1:A:60:ILE:CG1	2.40	0.43
1:C:18:CYS:SG	1:C:97:ILE:HB	2.59	0.43
1:C:23:TYR:CE1	1:C:29:LEU:HD22	2.53	0.43
1:C:80:GLN:NE2	1:C:81:GLU:H	2.15	0.43
1:B:21:HIS:ND1	1:B:23:TYR:CZ	2.85	0.43
1:E:75:LEU:HA	1:E:99:TYR:HD1	1.74	0.43
1:A:30:ILE:HD13	1:A:30:ILE:N	2.34	0.43
1:C:83:SER:O	1:C:84:ALA:HB2	2.14	0.43
1:F:39:LEU:HA	1:F:71:GLY:HA2	2.01	0.43
1:F:82:ARG:O	1:F:83:SER:C	2.57	0.43
1:D:163:MET:O	1:D:205:VAL:N	2.47	0.43
1:F:118:ALA:O	1:F:122:ARG:HB3	2.18	0.43
1:A:14:PHE:HB2	1:A:112:ILE:HG12	1.99	0.43
1:B:136:PHE:CE1	1:B:186:ILE:HD11	2.54	0.43
1:C:42:ILE:HD12	1:C:68:ASP:O	2.18	0.43
1:E:97:ILE:HD11	1:E:101:LYS:HG2	2.01	0.43
1:E:106:ILE:HD13	1:E:113:LEU:HD22	1.99	0.43
1:F:117:SER:CB	1:F:120:MET:HE2	2.49	0.43
1:F:165:ILE:CD1	1:F:203:ILE:HB	2.49	0.43
1:A:80:GLN:OE1	1:B:125:GLN:NE2	2.46	0.43
1:D:33:GLY:C	1:D:81:GLU:HG3	2.39	0.43
1:D:39:LEU:HD12	1:D:39:LEU:HA	1.74	0.43
1:D:69:PHE:HB2	1:D:119:GLN:OE1	2.19	0.43
1:E:10:THR:CG2	1:E:112:ILE:HG12	2.48	0.43
1:E:37:GLU:O	1:E:38:THR:OG1	2.29	0.43
1:F:11:LEU:O	1:F:15:LEU:HG	2.19	0.43
1:F:43:VAL:O	1:F:43:VAL:HG12	2.18	0.43
1:A:165:ILE:HD12	1:A:205:VAL:HG23	2.00	0.42
1:B:38:THR:CA	1:B:99:TYR:HE2	2.26	0.42
1:D:47:VAL:HG22	1:D:64:LEU:HB2	2.01	0.42
1:E:28:THR:HA	1:E:87:ARG:HA	2.01	0.42
1:E:44:LYS:HG2	1:E:45:GLY:N	2.34	0.42
1:E:123:ARG:HB3	1:E:124:LEU:H	1.67	0.42
1:A:35:LYS:HA	1:A:81:GLU:HB2	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:ILE:HD12	1:A:186:ILE:CD1	2.50	0.42
1:B:69:PHE:N	1:B:69:PHE:HD2	2.17	0.42
1:B:77:GLU:O	1:B:78:GLU:C	2.58	0.42
1:D:186:ILE:N	1:D:186:ILE:CD1	2.81	0.42
1:E:14:PHE:HB2	1:E:112:ILE:HD13	2.01	0.42
1:E:109:ASN:HA	1:E:110:PRO:HD2	1.92	0.42
1:F:14:PHE:C	1:F:14:PHE:HD1	2.12	0.42
1:A:56:GLY:O	1:A:57:LYS:HB2	2.15	0.42
1:A:127:THR:HA	1:A:130:LYS:HE2	2.02	0.42
1:B:51:ILE:CD1	1:B:61:LEU:HD21	2.50	0.42
1:C:51:ILE:HD12	1:C:59:MET:HB3	2.00	0.42
1:C:159:HIS:CG	1:C:160:PRO:HD2	2.54	0.42
1:E:39:LEU:HA	1:E:39:LEU:HD12	1.74	0.42
1:B:85:TRP:CE3	1:B:85:TRP:N	2.80	0.42
1:C:36:ALA:O	1:C:37:GLU:CB	2.66	0.42
1:C:78:GLU:H	1:C:78:GLU:HG3	1.56	0.42
1:F:39:LEU:HA	1:F:71:GLY:CA	2.49	0.42
1:F:40:TYR:N	1:F:40:TYR:CD2	2.87	0.42
1:A:10:THR:CG2	1:A:111:ASP:HB3	2.49	0.42
1:B:124:LEU:C	1:B:126:VAL:N	2.71	0.42
1:D:13:TRP:HZ3	1:D:112:ILE:CD1	2.30	0.42
1:D:124:LEU:O	1:D:126:VAL:N	2.52	0.42
1:F:42:ILE:CG2	1:F:66:GLN:HA	2.49	0.42
1:B:17:HIS:O	1:B:101:LYS:NZ	2.52	0.42
1:B:38:THR:N	1:B:99:TYR:CD2	2.87	0.42
1:C:143:ILE:HD12	1:C:186:ILE:CD1	2.50	0.42
1:D:69:PHE:CD2	1:D:119:GLN:OE1	2.72	0.42
1:F:50:LEU:HB2	1:F:85:TRP:CD1	2.55	0.42
1:F:83:SER:HB2	1:F:84:ALA:H	1.62	0.42
1:F:116:LEU:CD2	1:F:117:SER:N	2.79	0.42
1:C:14:PHE:CE2	1:C:112:ILE:CG2	2.95	0.42
1:C:109:ASN:O	1:C:111:ASP:N	2.52	0.42
1:C:128:SER:C	1:C:130:LYS:H	2.22	0.42
1:E:14:PHE:CD2	1:E:105:LEU:HD13	2.25	0.42
1:E:39:LEU:HD21	1:E:102:PHE:CD1	2.55	0.42
1:B:36:ALA:HB2	1:B:82:ARG:CZ	2.47	0.42
1:B:119:GLN:O	1:B:121:ALA:N	2.52	0.42
1:E:76:PHE:CD1	1:E:76:PHE:N	2.87	0.42
1:A:14:PHE:CE2	1:A:102:PHE:HE1	2.37	0.42
1:A:159:HIS:CG	1:A:160:PRO:HD2	2.55	0.42
1:B:36:ALA:O	1:B:37:GLU:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:69:PHE:CE1	1:B:116:LEU:HB2	2.54	0.42
1:C:18:CYS:CB	1:C:97:ILE:HB	2.50	0.42
1:D:37:GLU:CA	1:D:99:TYR:CD1	2.99	0.42
1:E:14:PHE:HZ	1:E:97:ILE:HG21	1.85	0.42
1:E:38:THR:CA	1:E:99:TYR:HD2	2.31	0.42
1:F:70:ILE:HA	1:F:71:GLY:C	2.39	0.42
1:A:14:PHE:O	1:A:14:PHE:HD1	2.02	0.42
1:A:69:PHE:CE2	1:A:116:LEU:HA	2.54	0.42
1:B:168:THR:OG1	1:B:171:GLU:HG3	2.20	0.42
1:C:23:TYR:CE1	1:C:29:LEU:CD2	3.00	0.42
1:D:159:HIS:CG	1:D:160:PRO:HD2	2.55	0.42
1:F:50:LEU:O	1:F:84:ALA:HB1	2.15	0.42
1:B:21:HIS:CE1	1:B:23:TYR:CZ	3.07	0.41
1:B:120:MET:C	1:B:123:ARG:HB2	2.41	0.41
1:B:157:MET:HB2	1:B:164:GLN:HB3	2.02	0.41
1:C:101:LYS:C	1:C:103:ARG:H	2.19	0.41
1:C:150:LEU:CA	1:C:153:GLN:HG2	2.44	0.41
1:E:51:ILE:CG2	1:E:84:ALA:O	2.68	0.41
1:E:134:LEU:CG	1:F:195:LEU:CB	2.98	0.41
1:A:76:PHE:O	1:A:77:GLU:CB	2.62	0.41
1:E:17:HIS:CD2	1:E:105:LEU:CD2	2.82	0.41
1:A:165:ILE:HD13	1:A:165:ILE:N	2.33	0.41
1:B:36:ALA:C	1:B:37:GLU:HG3	2.40	0.41
1:C:41:TYR:CG	1:C:69:PHE:CD1	3.04	0.41
1:D:157:MET:HB2	1:D:164:GLN:HB3	2.01	0.41
1:E:31:HIS:HB2	1:E:34:GLU:HG3	2.02	0.41
1:E:53:ASP:CG	1:E:59:MET:HE1	2.40	0.41
1:F:15:LEU:HD23	1:F:15:LEU:HA	1.91	0.41
1:F:26:LYS:N	1:F:88:ALA:O	2.30	0.41
1:C:14:PHE:O	1:C:17:HIS:N	2.54	0.41
1:C:102:PHE:CE2	1:C:106:ILE:HD11	2.55	0.41
1:D:86:VAL:CG1	1:D:87:ARG:N	2.84	0.41
1:F:54:GLU:O	1:F:55:GLU:HB3	2.20	0.41
1:F:106:ILE:O	1:F:110:PRO:HG3	2.20	0.41
1:F:195:LEU:N	1:F:206:TYR:HE1	2.12	0.41
1:A:23:TYR:CE1	1:A:29:LEU:HG	2.56	0.41
1:B:51:ILE:CD1	1:B:61:LEU:CD2	2.98	0.41
1:C:167:ILE:HD13	1:C:172:ILE:HD11	2.03	0.41
1:F:46:SER:HB3	1:F:65:ASN:HA	2.03	0.41
1:F:124:LEU:HD23	1:F:124:LEU:N	2.31	0.41
1:B:71:GLY:C	1:B:72:GLU:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:37:GLU:C	1:C:38:THR:O	2.58	0.41
1:C:43:VAL:C	1:C:44:LYS:HG3	2.39	0.41
1:C:109:ASN:C	1:C:111:ASP:H	2.24	0.41
1:E:8:ASP:HA	1:E:9:PRO:HD2	1.89	0.41
1:F:32:GLN:CG	1:F:83:SER:HA	2.36	0.41
1:E:28:THR:HG22	1:E:29:LEU:N	2.36	0.41
1:F:13:TRP:O	1:F:14:PHE:C	2.58	0.41
1:B:32:GLN:O	1:B:32:GLN:HG2	2.20	0.41
1:B:70:ILE:HD12	1:B:70:ILE:HA	1.75	0.41
1:B:114:MET:HA	1:B:114:MET:HE3	2.03	0.41
1:B:139:VAL:HG13	1:B:176:VAL:HG11	2.03	0.41
1:B:167:ILE:HD13	1:B:172:ILE:HD11	2.03	0.41
1:C:74:GLY:C	1:C:99:TYR:HE1	2.24	0.41
1:C:167:ILE:CD1	1:C:172:ILE:HD13	2.51	0.41
1:E:77:GLU:OE1	1:E:80:GLN:OE1	2.39	0.41
1:B:38:THR:HA	1:B:99:TYR:CD2	2.55	0.41
1:B:82:ARG:NH2	1:B:82:ARG:CG	2.82	0.41
1:C:30:ILE:HG22	1:C:31:HIS:H	1.49	0.41
1:D:8:ASP:HA	1:D:9:PRO:HD2	1.73	0.41
1:D:10:THR:HG23	1:D:112:ILE:HD12	2.03	0.41
1:D:33:GLY:HA2	1:D:81:GLU:CG	2.50	0.41
1:E:38:THR:HG22	1:E:97:ILE:O	2.20	0.41
1:E:164:GLN:HA	1:E:204:VAL:HG23	1.99	0.41
1:F:115:ARG:HG2	1:F:115:ARG:O	2.20	0.41
1:A:40:TYR:CD2	1:A:40:TYR:N	2.89	0.41
1:B:31:HIS:CD2	1:B:34:GLU:OE1	2.74	0.41
1:B:168:THR:HG1	1:B:170:GLN:HG3	1.85	0.41
1:C:35:LYS:O	1:C:36:ALA:C	2.45	0.41
1:D:11:LEU:HD23	1:D:11:LEU:HA	1.83	0.41
1:D:30:ILE:HD12	1:D:86:VAL:CG2	2.51	0.41
1:F:38:THR:HA	1:F:39:LEU:HB3	2.02	0.41
1:F:41:TYR:CB	1:F:69:PHE:CE1	3.03	0.41
1:F:65:ASN:CG	1:F:66:GLN:N	2.75	0.41
1:C:47:VAL:HG12	1:C:88:ALA:HA	2.03	0.40
1:D:82:ARG:O	1:D:84:ALA:N	2.53	0.40
1:E:14:PHE:O	1:E:17:HIS:CB	2.53	0.40
1:E:46:SER:CB	1:E:90:THR:CG2	2.99	0.40
1:F:11:LEU:HD22	1:F:15:LEU:HG	2.03	0.40
1:F:38:THR:O	1:F:82:ARG:NH1	2.33	0.40
1:F:127:THR:HA	1:F:130:LYS:HE2	2.03	0.40
1:C:32:GLN:C	1:C:34:GLU:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:143:ILE:HD12	1:C:186:ILE:HD12	2.03	0.40
1:E:205:VAL:HG12	1:E:206:TYR:C	2.41	0.40
1:F:46:SER:HB2	1:F:64:LEU:O	2.21	0.40
1:A:87:ARG:HG2	1:A:88:ALA:N	2.36	0.40
1:F:119:GLN:O	1:F:123:ARG:HD3	2.21	0.40
1:F:195:LEU:CA	1:F:206:TYR:CE1	3.05	0.40
1:B:60:ILE:HD13	1:B:63:TYR:OH	2.21	0.40
1:C:21:HIS:CB	1:C:23:TYR:CZ	3.05	0.40
1:C:112:ILE:N	1:C:112:ILE:CD1	2.85	0.40
1:D:10:THR:CG2	1:D:112:ILE:HD12	2.51	0.40
1:D:41:TYR:OH	1:D:67:GLY:HA2	2.21	0.40
1:F:13:TRP:CD2	1:F:14:PHE:N	2.88	0.40
1:F:47:VAL:CG2	1:F:64:LEU:HB2	2.52	0.40
1:F:74:GLY:HA3	1:F:99:TYR:CE1	2.57	0.40
1:C:51:ILE:HD11	1:C:59:MET:SD	2.62	0.40
1:F:142:ARG:HD2	1:F:176:VAL:HG13	2.04	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	195/210 (93%)	163 (84%)	21 (11%)	11 (6%)	2	19
1	B	195/210 (93%)	164 (84%)	18 (9%)	13 (7%)	1	15
1	C	195/210 (93%)	154 (79%)	29 (15%)	12 (6%)	1	17
1	D	195/210 (93%)	173 (89%)	18 (9%)	4 (2%)	7	40
1	E	195/210 (93%)	159 (82%)	25 (13%)	11 (6%)	2	19
1	F	195/210 (93%)	149 (76%)	32 (16%)	14 (7%)	1	13
All	All	1170/1260 (93%)	962 (82%)	143 (12%)	65 (6%)	2	19

All (65) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	14	PHE
1	A	15	LEU
1	A	35	LYS
1	A	57	LYS
1	A	82	ARG
1	A	83	SER
1	A	84	ALA
1	B	110	PRO
1	B	118	ALA
1	B	119	GLN
1	B	128	SER
1	C	17	HIS
1	C	34	GLU
1	C	36	ALA
1	C	38	THR
1	C	84	ALA
1	D	84	ALA
1	E	16	SER
1	E	84	ALA
1	E	205	VAL
1	F	70	ILE
1	F	75	LEU
1	F	83	SER
1	F	85	TRP
1	F	125	GLN
1	A	18	CYS
1	A	71	GLY
1	B	78	GLU
1	B	80	GLN
1	B	83	SER
1	B	84	ALA
1	B	120	MET
1	C	11	LEU
1	C	15	LEU
1	C	55	GLU
1	C	71	GLY
1	C	73	LEU
1	D	71	GLY
1	E	39	LEU
1	E	57	LYS
1	E	79	GLY
1	F	76	PHE

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Mol	Chain	Res	Type
1	A	39	LEU
1	E	78	GLU
1	E	91	ALA
1	E	122	ARG
1	F	14	PHE
1	F	16	SER
1	F	39	LEU
1	F	61	LEU
1	C	40	TYR
1	C	110	PRO
1	D	83	SER
1	F	72	GLU
1	F	78	GLU
1	F	126	VAL
1	A	55	GLU
1	B	115	ARG
1	D	125	GLN
1	E	38	THR
1	F	51	ILE
1	B	32	GLN
1	B	39	LEU
1	B	79	GLY
1	E	110	PRO

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	172/181 (95%)	157 (91%)	15 (9%)	10 41
1	B	172/181 (95%)	156 (91%)	16 (9%)	9 38
1	C	172/181 (95%)	159 (92%)	13 (8%)	13 45
1	D	172/181 (95%)	164 (95%)	8 (5%)	26 61
1	E	172/181 (95%)	163 (95%)	9 (5%)	23 58
1	F	172/181 (95%)	155 (90%)	17 (10%)	8 35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	1032/1086 (95%)	954 (92%)	78 (8%)	13 45

All (78) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	11	LEU
1	A	12	GLU
1	A	15	LEU
1	A	26	LYS
1	A	38	THR
1	A	57	LYS
1	A	61	LEU
1	A	76	PHE
1	A	77	GLU
1	A	80	GLN
1	A	81	GLU
1	A	82	ARG
1	A	83	SER
1	A	85	TRP
1	A	165	ILE
1	B	11	LEU
1	B	26	LYS
1	B	32	GLN
1	B	38	THR
1	B	51	ILE
1	B	70	ILE
1	B	72	GLU
1	B	73	LEU
1	B	78	GLU
1	B	80	GLN
1	B	82	ARG
1	B	85	TRP
1	B	114	MET
1	B	116	LEU
1	B	122	ARG
1	B	199	HIS
1	C	11	LEU
1	C	15	LEU
1	C	17	HIS
1	C	26	LYS
1	C	41	TYR
1	C	72	GLU

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Mol	Chain	Res	Type
1	C	77	GLU
1	C	80	GLN
1	C	81	GLU
1	C	82	ARG
1	C	98	SER
1	C	103	ARG
1	C	114	MET
1	D	11	LEU
1	D	26	LYS
1	D	32	GLN
1	D	38	THR
1	D	81	GLU
1	D	114	MET
1	D	115	ARG
1	D	122	ARG
1	E	15	LEU
1	E	20	ILE
1	E	26	LYS
1	E	27	SER
1	E	76	PHE
1	E	86	VAL
1	E	90	THR
1	E	114	MET
1	E	119	GLN
1	F	11	LEU
1	F	14	PHE
1	F	17	HIS
1	F	20	ILE
1	F	38	THR
1	F	54	GLU
1	F	61	LEU
1	F	75	LEU
1	F	83	SER
1	F	85	TRP
1	F	90	THR
1	F	93	GLU
1	F	114	MET
1	F	116	LEU
1	F	122	ARG
1	F	123	ARG
1	F	124	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (49)

such sidechains are listed below:

Mol	Chain	Res	Type
1	A	31	HIS
1	A	66	GLN
1	A	80	GLN
1	A	149	ASN
1	A	164	GLN
1	A	174	GLN
1	A	193	GLN
1	B	32	GLN
1	B	66	GLN
1	B	80	GLN
1	B	125	GLN
1	B	149	ASN
1	B	153	GLN
1	B	174	GLN
1	C	17	HIS
1	C	32	GLN
1	C	66	GLN
1	C	80	GLN
1	C	104	GLN
1	C	119	GLN
1	C	149	ASN
1	C	153	GLN
1	C	174	GLN
1	D	31	HIS
1	D	66	GLN
1	D	104	GLN
1	D	149	ASN
1	D	153	GLN
1	D	164	GLN
1	D	174	GLN
1	E	31	HIS
1	E	32	GLN
1	E	66	GLN
1	E	80	GLN
1	E	104	GLN
1	E	119	GLN
1	E	149	ASN
1	E	153	GLN
1	E	174	GLN
1	F	17	HIS
1	F	21	HIS
1	F	32	GLN

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Mol	Chain	Res	Type
1	F	104	GLN
1	F	119	GLN
1	F	125	GLN
1	F	149	ASN
1	F	153	GLN
1	F	174	GLN
1	F	193	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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1
1	D	1
1	C	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	58:GLU	C	59:MET	N	1.13
1	D	85:TRP	C	86:VAL	N	1.11
1	C	78:GLU	C	79:GLY	N	1.06

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

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

Unable to reproduce the depositors R factor - this section is therefore empty.

6.3 Carbohydrates [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

6.4 Ligands [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

6.5 Other polymers [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.