



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 01:57 PM UTC

PDB ID : 3BSZ / pdb_00003bsz
Title : Crystal structure of the transthyretin-retinol binding protein-Fab complex
Authors : Zanotti, G.; Cendron, L.; Gliubich, F.; Folli, C.; Berni, R.
Deposited on : 2007-12-27
Resolution : 3.38 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 : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

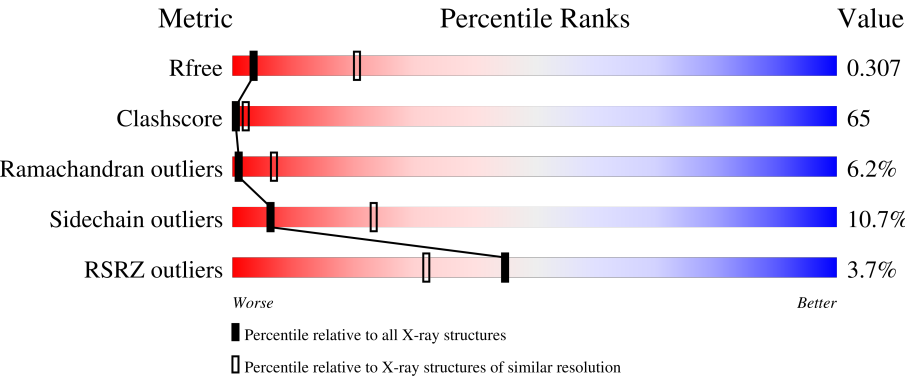
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.38 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}	180053	1047 (3.42-3.34)
Clashscore	190562	1067 (3.42-3.34)
Ramachandran outliers	187476	1056 (3.42-3.34)
Sidechain outliers	187428	1056 (3.42-3.34)
RSRZ outliers	180081	1047 (3.42-3.34)

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	127	27% 57% 10% 6%
1	B	127	3% 30% 49% 13% 6%
1	C	127	21% 65% 6% 6%
1	D	127	4% 28% 50% 13% 6%
2	E	176	2% 20% 64% 12% 2%

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Mol	Chain	Length	Quality of chain
2	F	176	24%64%11%
3	L	215	5% 26%60%13%
3	M	215	4% 23%63%13%
4	H	215	7% 30%54%14%
4	N	215	7% 26%57%15%

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 13428 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 Transthyretin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	119	Total	C	N	O	S	0	0	0
			920	587	151	180	2			
1	B	119	Total	C	N	O	S	0	0	0
			920	587	151	180	2			
1	C	119	Total	C	N	O	S	0	0	0
			920	587	151	180	2			
1	D	119	Total	C	N	O	S	0	0	0
			920	587	151	180	2			

- Molecule 2 is a protein called Plasma retinol-binding protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	174	Total	C	N	O	S	0	0	0
			1407	884	244	269	10			
2	F	174	Total	C	N	O	S	0	0	0
			1407	884	244	269	10			

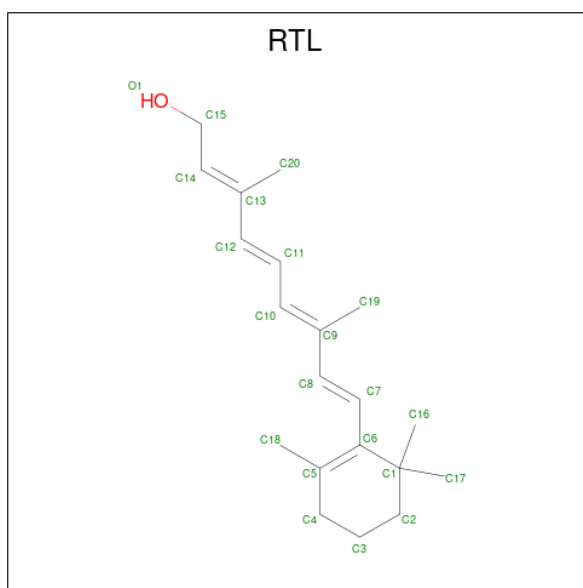
- Molecule 3 is a protein called Fab fragment heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	L	215	Total	C	N	O	S	0	0	0
			1667	1035	283	343	6			
3	M	215	Total	C	N	O	S	0	0	0
			1667	1035	283	343	6			

- Molecule 4 is a protein called Fab fragment light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	H	215	Total	C	N	O	S	0	0	0
			1612	1014	266	324	8			
4	N	215	Total	C	N	O	S	0	0	0
			1612	1014	266	324	8			

- Molecule 5 is RETINOL (CCD ID: RTL) (formula: $C_{20}H_{30}O$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	E	1	Total	C	O	0	0
			21	20	1		
5	F	1	Total	C	O	0	0
			21	20	1		

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	19	Total	O	0	0
			19	19		
6	B	12	Total	O	0	0
			12	12		
6	C	29	Total	O	0	0
			29	29		
6	D	27	Total	O	0	0
			27	27		
6	E	27	Total	O	0	0
			27	27		
6	F	31	Total	O	0	0
			31	31		
6	L	48	Total	O	0	0
			48	48		
6	H	38	Total	O	0	0
			38	38		
6	M	52	Total	O	0	0
			52	52		

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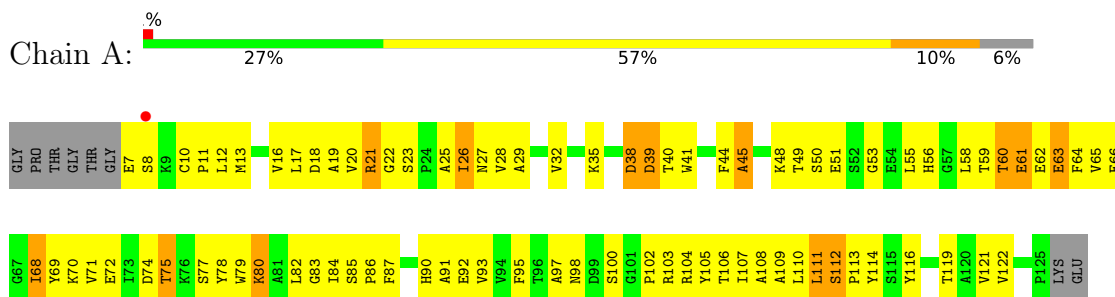
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	N	51	Total	O	0	0
			51	51		

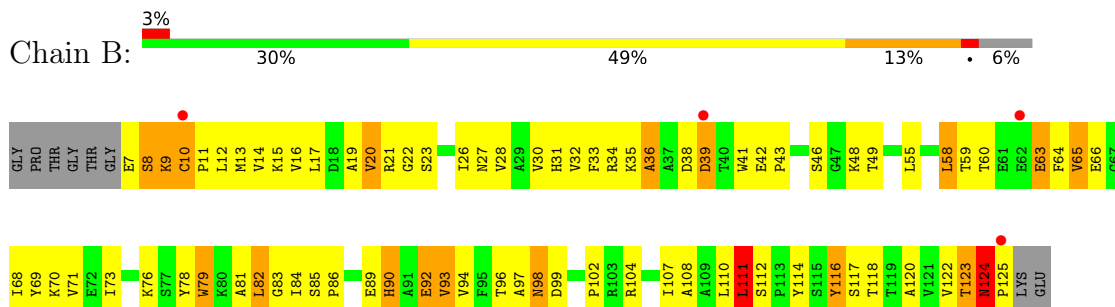
3 Residue-property plots [i](#)

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

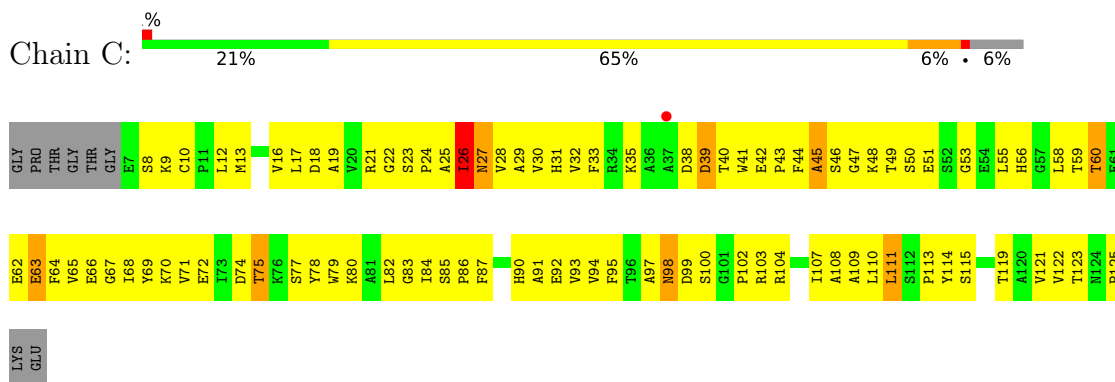
- Molecule 1: Transthyretin



- Molecule 1: Transthyretin

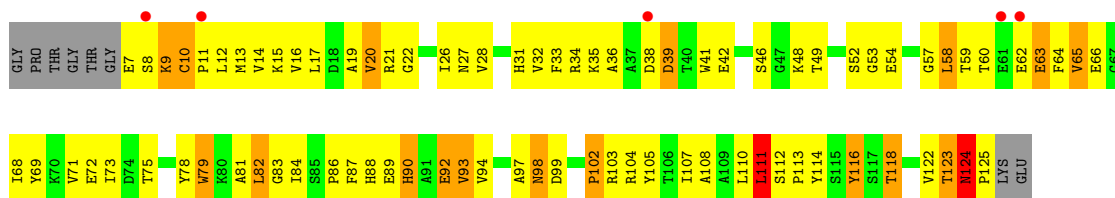


- Molecule 1: Transthyretin

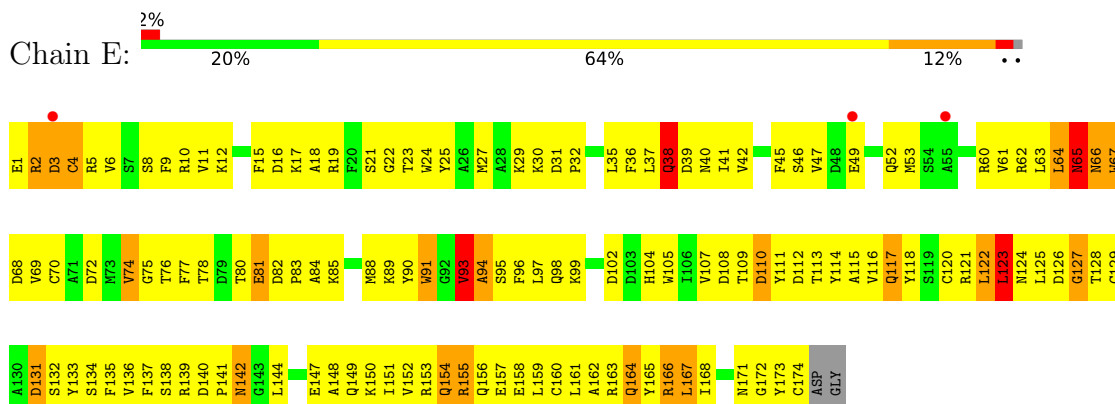


- Molecule 1: Transthyretin

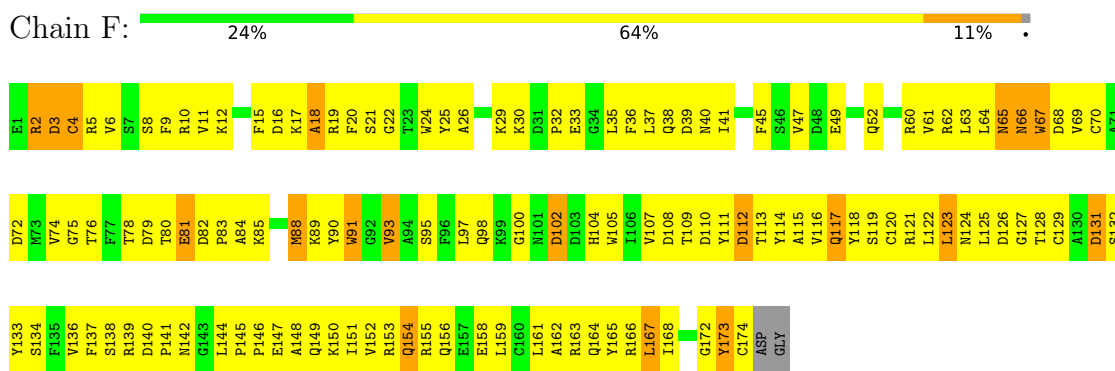




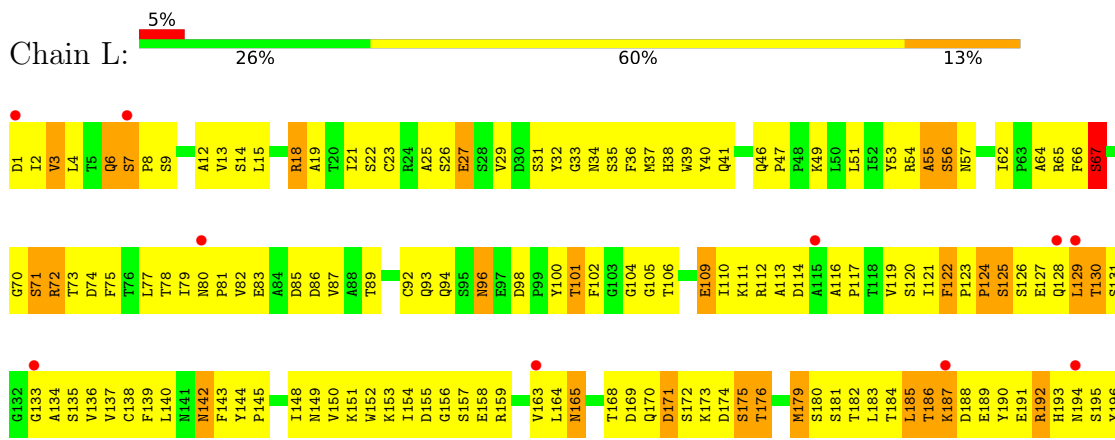
• Molecule 2: Plasma retinol-binding protein



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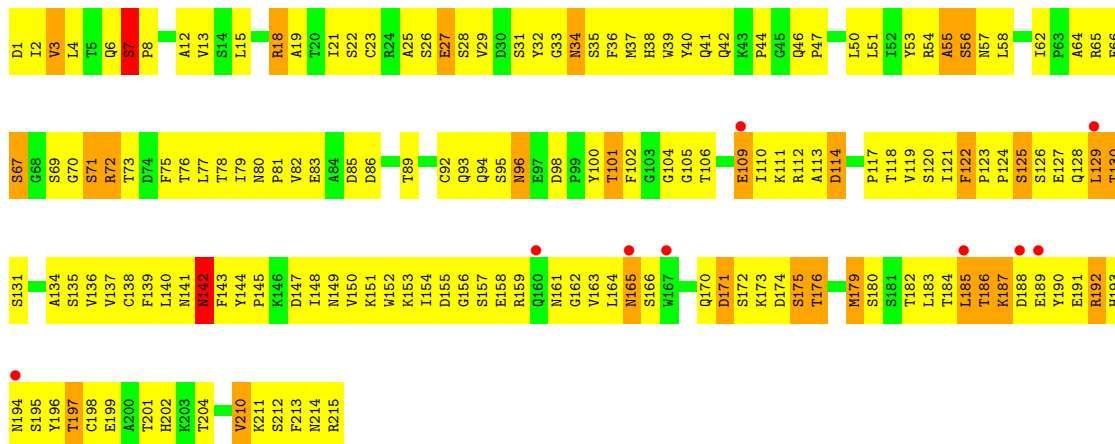


• Molecule 3: Fab fragment heavy chain

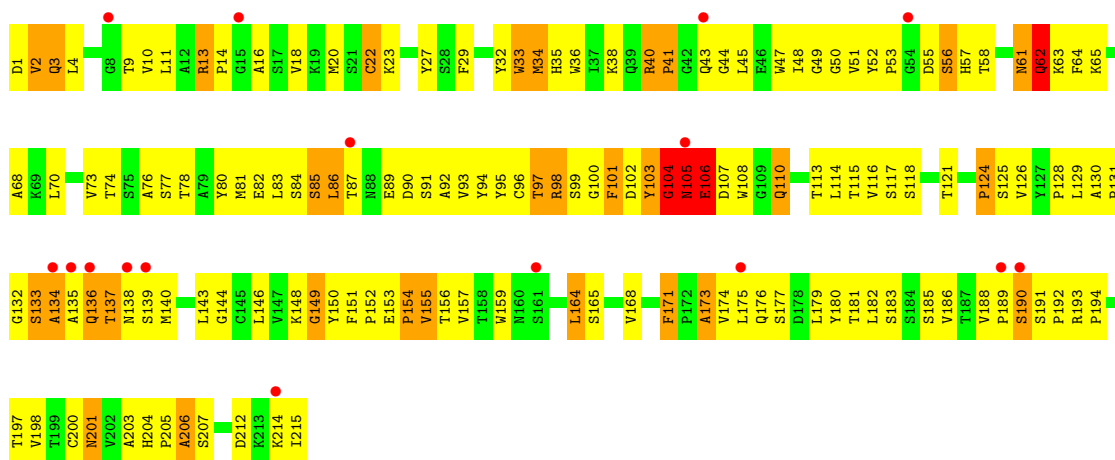




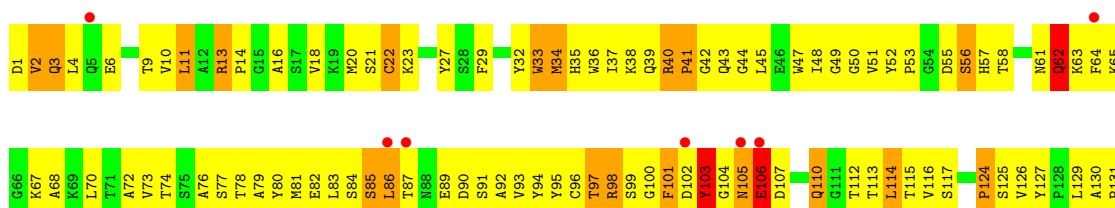
• Molecule 3: Fab fragment heavy chain

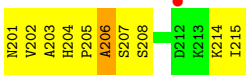
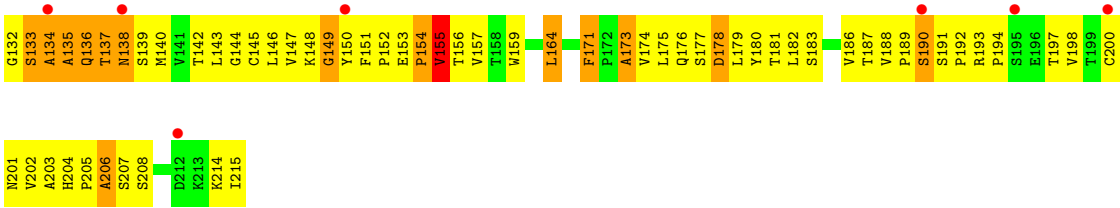


• Molecule 4: Fab fragment light chain



• Molecule 4: Fab fragment light chain





4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	159.62Å 223.18Å 121.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.72 – 3.38 15.72 – 3.38	Depositor EDS
% Data completeness (in resolution range)	78.8 (15.72-3.38) 78.2 (15.72-3.38)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.75 (at 3.41Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.239 , 0.312 0.248 , 0.307	Depositor DCC
R_{free} test set	1190 reflections (4.62%)	wwPDB-VP
Wilson B-factor (Å ²)	64.6	Xtriage
Anisotropy	0.317	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 88.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	13428	wwPDB-VP
Average B, all atoms (Å ²)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.18% 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

5.1 Standard geometry

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

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	0.67	0/944	1.04	5/1287 (0.4%)
1	B	0.65	0/944	1.05	4/1287 (0.3%)
1	C	0.69	0/944	1.06	5/1287 (0.4%)
1	D	0.63	0/944	1.06	2/1287 (0.2%)
2	E	0.65	0/1439	1.10	11/1945 (0.6%)
2	F	0.60	0/1439	1.12	8/1945 (0.4%)
3	L	0.59	0/1705	1.13	12/2316 (0.5%)
3	M	0.54	0/1705	1.12	12/2316 (0.5%)
4	H	0.61	2/1655 (0.1%)	1.12	14/2259 (0.6%)
4	N	0.59	0/1655	1.10	14/2259 (0.6%)
All	All	0.62	2/13374 (0.0%)	1.10	87/18188 (0.5%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	105	ASN	N-CA	7.17	1.55	1.46
4	H	104	GLY	C-O	-5.40	1.16	1.23

All (87) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	N	188	VAL	N-CA-C	9.25	116.78	109.19
3	L	122	PHE	CA-C-N	9.18	129.83	120.38
3	L	122	PHE	C-N-CA	9.18	129.83	120.38
3	M	122	PHE	CA-C-N	9.07	129.72	120.38
3	M	122	PHE	C-N-CA	9.07	129.72	120.38
4	H	188	VAL	N-CA-C	8.75	116.36	109.19
4	N	33	TRP	N-CA-C	-8.55	101.77	108.78
2	F	95	SER	N-CA-C	7.24	120.59	111.69
3	L	210	VAL	N-CA-C	7.20	118.26	107.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	110	ASP	N-CA-C	-7.17	102.34	113.02
3	M	210	VAL	N-CA-C	7.10	118.09	107.80
3	M	129	LEU	N-CA-C	-7.01	103.40	112.23
2	F	70	CYS	N-CA-C	-6.98	99.34	109.59
2	F	123	LEU	N-CA-C	6.86	120.17	110.50
1	A	53	GLY	N-CA-C	-6.71	105.25	114.64
4	H	33	TRP	CB-CA-C	-6.71	107.41	117.07
2	E	88	MET	N-CA-C	6.59	119.46	108.20
4	H	33	TRP	N-CA-C	-6.54	103.42	108.78
2	E	89	LYS	N-CA-C	-6.49	100.88	110.48
2	F	89	LYS	N-CA-C	-6.47	100.90	110.48
3	L	129	LEU	N-CA-C	-6.45	103.76	111.69
2	E	95	SER	N-CA-C	6.43	119.60	111.69
1	D	63	GLU	N-CA-C	-6.40	104.39	111.82
3	M	186	THR	N-CA-C	-6.38	101.34	110.59
3	L	186	THR	N-CA-C	-6.37	101.36	110.59
2	E	70	CYS	N-CA-C	-6.36	100.00	109.15
4	H	56	SER	N-CA-C	-6.32	105.98	113.38
3	M	197	THR	N-CA-C	6.31	119.78	109.24
4	N	103	TYR	CB-CA-C	-6.30	107.34	116.54
4	N	33	TRP	CB-CA-C	-6.21	108.12	117.07
2	F	88	MET	N-CA-C	6.18	118.77	108.20
4	N	134	ALA	N-CA-C	-6.16	105.48	112.87
1	C	53	GLY	N-CA-C	-6.15	106.03	114.64
4	H	173	ALA	N-CA-C	6.13	118.45	110.43
4	H	134	ALA	N-CA-C	-6.11	105.54	112.87
3	L	116	ALA	CA-C-N	6.08	126.28	119.90
3	L	116	ALA	C-N-CA	6.08	126.28	119.90
1	C	19	ALA	N-CA-C	6.06	118.66	111.33
2	E	69	VAL	N-CA-C	6.04	116.31	107.37
4	H	105	ASN	N-CA-C	-6.03	97.96	110.80
3	L	96	ASN	N-CA-C	-5.99	106.10	113.41
2	E	157	GLU	N-CA-C	-5.98	104.76	111.28
2	E	110	ASP	N-CA-C	-5.95	104.15	113.02
1	B	63	GLU	N-CA-C	-5.93	104.94	111.82
1	B	111	LEU	N-CA-C	5.89	119.00	109.40
2	E	123	LEU	N-CA-C	5.89	119.19	110.48
3	M	96	ASN	N-CA-C	-5.85	106.27	113.41
4	N	56	SER	N-CA-C	-5.83	106.56	113.38
1	A	56	HIS	N-CA-C	5.80	118.86	109.40
1	D	111	LEU	N-CA-C	5.72	118.79	109.24
1	C	21	ARG	N-CA-C	5.62	118.34	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	69	VAL	N-CA-C	5.60	115.66	107.37
3	L	197	THR	N-CA-C	5.57	118.53	109.24
1	B	8	SER	CB-CA-C	-5.53	109.71	117.23
1	C	26	ILE	N-CA-C	5.52	116.93	108.71
4	N	103	TYR	N-CA-C	5.52	116.45	108.34
4	N	171	PHE	CA-C-N	5.47	126.67	119.84
4	N	171	PHE	C-N-CA	5.47	126.67	119.84
3	L	192	ARG	N-CA-C	-5.46	105.27	113.89
1	A	21	ARG	N-CA-C	5.46	118.15	111.82
2	F	112	ASP	N-CA-C	5.45	119.10	112.23
4	H	105	ASN	N-CA-CB	5.40	119.62	110.49
4	N	173	ALA	N-CA-C	5.37	117.46	110.43
2	E	94	ALA	N-CA-C	-5.33	103.10	110.35
4	H	40	ARG	CA-C-N	5.28	126.44	119.84
4	H	40	ARG	C-N-CA	5.28	126.44	119.84
1	A	19	ALA	N-CA-C	5.28	117.71	111.33
4	N	114	LEU	N-CA-C	5.27	116.92	107.80
4	N	86	LEU	N-CA-C	5.26	117.51	110.35
2	E	122	LEU	N-CA-C	5.26	118.00	109.06
4	N	40	ARG	CA-C-N	5.19	126.32	119.84
4	N	40	ARG	C-N-CA	5.19	126.32	119.84
4	H	86	LEU	N-CA-C	5.18	117.39	110.35
3	M	192	ARG	N-CA-C	-5.15	105.75	113.89
2	E	93	VAL	N-CA-C	-5.12	105.51	110.42
3	L	3	VAL	N-CA-C	5.10	115.65	108.36
1	A	61	GLU	N-CA-C	-5.09	106.76	112.87
1	C	56	HIS	N-CA-C	5.05	117.63	109.40
1	B	36	ALA	N-CA-C	5.04	117.98	110.52
3	M	3	VAL	N-CA-C	5.03	115.56	108.36
3	M	7	SER	CA-C-N	-5.03	114.17	120.51
3	M	7	SER	C-N-CA	-5.03	114.17	120.51
4	H	33	TRP	CA-C-O	5.03	120.86	117.94
3	M	176	THR	CB-CA-C	-5.03	108.11	114.40
3	L	176	THR	CB-CA-C	-5.02	108.13	114.40
4	H	171	PHE	CA-C-N	5.01	126.10	119.84
4	H	171	PHE	C-N-CA	5.01	126.10	119.84

There are no chirality outliers.

There are no planarity outliers.

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	920	0	893	120	0
1	B	920	0	893	107	0
1	C	920	0	893	111	0
1	D	920	0	893	123	0
2	E	1407	0	1334	197	0
2	F	1407	0	1334	198	0
3	L	1667	0	1590	221	0
3	M	1667	0	1590	252	0
4	H	1612	0	1560	193	0
4	N	1612	0	1560	235	0
5	E	21	0	30	1	0
5	F	21	0	30	3	0
6	A	19	0	0	6	0
6	B	12	0	0	5	0
6	C	29	0	0	14	0
6	D	27	0	0	18	0
6	E	27	0	0	16	0
6	F	31	0	0	17	0
6	H	38	0	0	23	0
6	L	48	0	0	30	0
6	M	52	0	0	46	0
6	N	51	0	0	48	0
All	All	13428	0	12600	1680	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 65.

All (1680) 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)
3:L:128:GLN:NE2	3:L:135:SER:HB2	1.51	1.25
3:M:128:GLN:NE2	3:M:135:SER:HB2	1.54	1.20
3:L:77:LEU:HG	6:L:250:HOH:O	1.46	1.15
1:A:82:LEU:HG	2:F:67:TRP:HH2	1.02	1.14
3:L:165:ASN:HA	6:L:233:HOH:O	1.46	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:71:VAL:HB	1:D:93:VAL:HG23	1.36	1.07
1:A:16:VAL:HG23	1:A:25:ALA:HB3	1.37	1.07
3:M:112:ARG:HG2	3:M:113:ALA:H	1.18	1.06
4:N:104:GLY:O	4:N:105:ASN:CG	1.99	1.06
3:L:37:MET:HB3	3:L:55:ALA:HB2	1.37	1.05
3:M:37:MET:HB3	3:M:55:ALA:HB2	1.34	1.05
3:M:195:SER:HA	3:M:214:ASN:HD22	1.21	1.04
1:A:114:TYR:HD2	1:D:22:GLY:HA3	1.19	1.04
3:L:128:GLN:HE22	3:L:135:SER:CB	1.70	1.03
1:D:20:VAL:HG12	1:D:21:ARG:HG3	1.39	1.02
3:M:183:LEU:HB3	6:M:236:HOH:O	1.57	1.02
1:A:82:LEU:HG	2:F:67:TRP:CH2	1.94	1.02
3:L:195:SER:HA	3:L:214:ASN:HD22	1.17	1.02
1:D:84:ILE:HD11	2:F:63:LEU:HD21	1.39	1.02
1:A:16:VAL:HG12	1:A:109:ALA:HB3	1.41	1.01
1:B:71:VAL:HB	1:B:93:VAL:HG23	1.42	1.01
3:M:80:ASN:HD22	3:M:81:PRO:HA	1.23	1.01
3:M:128:GLN:HE22	3:M:135:SER:HB2	1.06	1.00
1:D:35:LYS:HE3	6:D:140:HOH:O	1.60	1.00
3:L:112:ARG:HG2	3:L:113:ALA:H	1.22	0.99
3:L:79:ILE:HG13	6:L:250:HOH:O	1.61	0.99
1:A:84:ILE:HA	2:F:66:ASN:HD21	1.29	0.97
3:L:80:ASN:HD22	3:L:81:PRO:HA	1.26	0.97
1:A:114:TYR:CD2	1:D:22:GLY:HA3	2.00	0.96
4:N:96:CYS:HB3	6:N:227:HOH:O	1.66	0.96
2:F:63:LEU:HD22	2:F:67:TRP:HD1	1.30	0.95
2:E:121:ARG:HB2	2:E:131:ASP:HB3	1.45	0.95
2:F:121:ARG:HB2	2:F:131:ASP:HB3	1.49	0.95
1:C:60:THR:HG23	1:C:63:GLU:H	1.31	0.94
1:C:16:VAL:HG12	1:C:109:ALA:HB3	1.49	0.94
1:C:111:LEU:HD23	1:C:111:LEU:H	1.32	0.93
1:B:124:ASN:HB3	1:B:125:PRO:HD3	1.50	0.93
1:D:113:PRO:HG3	6:D:142:HOH:O	1.69	0.93
4:N:81:MET:HB3	6:N:260:HOH:O	1.66	0.93
1:C:16:VAL:HG23	1:C:25:ALA:HB3	1.52	0.91
2:F:121:ARG:O	2:F:122:LEU:HD13	1.70	0.91
3:L:112:ARG:HG2	3:L:113:ALA:N	1.81	0.91
1:A:60:THR:HG23	1:A:63:GLU:H	1.35	0.90
3:M:183:LEU:HA	6:M:255:HOH:O	1.71	0.90
3:L:49:LYS:HG3	6:L:230:HOH:O	1.71	0.90
3:M:112:ARG:HG2	3:M:113:ALA:N	1.83	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:167:LEU:HB2	4:H:103:TYR:OH	1.73	0.89
3:M:40:TYR:OH	4:N:105:ASN:HB3	1.72	0.89
1:B:20:VAL:HG12	1:B:21:ARG:HG3	1.53	0.89
4:H:214:LYS:HG2	4:H:215:ILE:H	1.37	0.89
4:N:47:TRP:CZ2	4:N:49:GLY:HA2	2.09	0.88
3:L:124:PRO:HA	6:L:252:HOH:O	1.72	0.88
1:B:22:GLY:HA3	1:C:114:TYR:HD2	1.39	0.88
3:M:182:THR:HG22	6:M:221:HOH:O	1.71	0.88
3:L:191:GLU:HA	3:L:215:ARG:CZ	2.04	0.88
4:H:154:PRO:O	4:H:155:VAL:HG13	1.74	0.87
3:L:164:LEU:HD21	4:H:174:VAL:HG21	1.55	0.87
3:M:166:SER:HB3	6:M:262:HOH:O	1.74	0.87
1:D:71:VAL:O	1:D:92:GLU:HA	1.74	0.87
3:M:191:GLU:HA	3:M:215:ARG:CZ	2.03	0.87
2:E:12:LYS:HE2	6:E:189:HOH:O	1.75	0.86
4:N:130:ALA:HA	6:N:257:HOH:O	1.74	0.86
1:A:84:ILE:HA	2:F:66:ASN:ND2	1.89	0.86
2:E:63:LEU:HD22	2:E:67:TRP:HD1	1.37	0.86
4:N:131:PRO:HD2	6:N:229:HOH:O	1.75	0.86
1:A:111:LEU:HD23	1:A:111:LEU:H	1.39	0.86
4:N:18:VAL:HG23	4:N:83:LEU:HB2	1.56	0.86
1:D:49:THR:HB	6:D:136:HOH:O	1.73	0.86
2:E:63:LEU:HD22	2:E:67:TRP:CD1	2.10	0.86
1:C:29:ALA:HA	1:C:48:LYS:HG2	1.58	0.86
3:L:80:ASN:HD22	3:L:81:PRO:CA	1.88	0.85
3:L:134:ALA:HA	6:L:222:HOH:O	1.73	0.85
2:E:63:LEU:O	2:E:67:TRP:HB3	1.73	0.85
2:F:63:LEU:O	2:F:67:TRP:HB3	1.77	0.84
1:A:121:VAL:HG23	1:C:23:SER:HA	1.60	0.84
2:E:53:MET:HG3	6:E:193:HOH:O	1.74	0.84
1:B:28:VAL:O	1:B:49:THR:HG23	1.76	0.84
4:N:104:GLY:O	4:N:105:ASN:OD1	1.93	0.84
1:C:32:VAL:HB	6:C:138:HOH:O	1.76	0.84
1:C:71:VAL:HG12	6:C:154:HOH:O	1.77	0.84
2:F:124:ASN:OD1	2:F:128:THR:HB	1.78	0.84
4:H:99:SER:HA	4:H:106:GLU:OE2	1.75	0.83
4:N:154:PRO:O	4:N:155:VAL:HG13	1.77	0.83
3:M:128:GLN:HE22	3:M:135:SER:CB	1.90	0.83
4:H:189:PRO:O	4:H:192:PRO:HD2	1.78	0.83
3:L:40:TYR:OH	4:H:105:ASN:HB3	1.78	0.83
3:M:143:PHE:HB2	6:M:245:HOH:O	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:98:ASN:HD22	1:C:102:PRO:HA	1.43	0.83
2:E:152:VAL:HG12	2:E:156:GLN:NE2	1.92	0.83
4:H:18:VAL:HG23	4:H:83:LEU:HB2	1.62	0.82
2:F:63:LEU:HD22	2:F:67:TRP:CD1	2.13	0.82
3:L:165:ASN:N	3:L:165:ASN:HD22	1.76	0.82
3:M:164:LEU:HB3	6:M:242:HOH:O	1.78	0.81
1:A:82:LEU:CG	2:F:67:TRP:HH2	1.91	0.81
1:C:93:VAL:HG11	1:C:107:ILE:HD13	1.62	0.81
4:N:191:SER:OG	4:N:192:PRO:HD3	1.81	0.81
4:N:214:LYS:HG2	4:N:215:ILE:H	1.45	0.81
1:B:16:VAL:HG13	1:B:111:LEU:HD21	1.61	0.81
3:L:41:GLN:HB2	3:L:51:LEU:HD11	1.61	0.81
4:H:47:TRP:CZ2	4:H:49:GLY:HA2	2.16	0.81
3:M:80:ASN:HD22	3:M:81:PRO:CA	1.91	0.81
3:M:135:SER:HA	3:M:183:LEU:O	1.81	0.81
1:D:83:GLY:HA3	2:F:35:LEU:HD12	1.63	0.81
3:M:117:PRO:HB3	3:M:143:PHE:HB3	1.61	0.81
1:B:71:VAL:O	1:B:92:GLU:HA	1.80	0.81
3:L:128:GLN:HE22	3:L:135:SER:HB2	0.76	0.81
2:F:152:VAL:HG12	2:F:156:GLN:NE2	1.95	0.80
4:H:99:SER:HA	4:H:106:GLU:CD	2.05	0.80
1:C:74:ASP:OD2	1:C:77:SER:HB2	1.82	0.80
3:L:197:THR:HG23	3:L:212:SER:HB3	1.63	0.80
3:M:197:THR:HG23	3:M:212:SER:HB3	1.63	0.80
1:C:111:LEU:H	1:C:111:LEU:CD2	1.95	0.80
1:A:23:SER:HA	1:C:121:VAL:HG23	1.64	0.80
1:A:17:LEU:HB2	1:A:110:LEU:HD13	1.63	0.79
2:F:125:LEU:HD12	2:F:126:ASP:N	1.98	0.78
3:L:54:ARG:HG2	6:L:237:HOH:O	1.83	0.78
1:A:111:LEU:H	1:A:111:LEU:CD2	1.97	0.78
1:D:124:ASN:HB3	1:D:125:PRO:HD3	1.65	0.78
3:M:140:LEU:HA	6:M:217:HOH:O	1.83	0.78
3:M:173:LYS:HG2	3:M:174:ASP:H	1.49	0.78
1:B:31:HIS:CE1	1:B:46:SER:HB2	2.19	0.78
3:M:2:ILE:HD11	6:M:259:HOH:O	1.84	0.78
3:M:196:TYR:O	3:M:212:SER:HB2	1.84	0.78
1:A:84:ILE:CA	2:F:66:ASN:HD21	1.97	0.78
2:E:121:ARG:HB3	2:E:122:LEU:HD22	1.65	0.78
2:F:102:ASP:CG	2:F:121:ARG:HH22	1.92	0.77
3:L:112:ARG:CG	3:L:113:ALA:H	1.98	0.77
3:L:187:LYS:HZ2	3:L:187:LYS:HB3	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:16:VAL:HG13	1:D:111:LEU:HD21	1.64	0.77
2:F:121:ARG:HB3	2:F:122:LEU:HD22	1.65	0.77
2:E:99:LYS:HE2	6:E:191:HOH:O	1.84	0.77
4:N:101:PHE:HB2	6:N:237:HOH:O	1.83	0.77
4:N:70:LEU:HD11	4:N:81:MET:HG3	1.66	0.77
4:N:189:PRO:HB2	4:N:192:PRO:HD3	1.66	0.77
3:L:196:TYR:O	3:L:212:SER:HB2	1.85	0.77
1:C:82:LEU:HB3	6:C:151:HOH:O	1.85	0.77
1:D:12:LEU:HG	1:D:58:LEU:HD12	1.67	0.77
4:H:104:GLY:HA3	6:H:229:HOH:O	1.85	0.76
1:C:32:VAL:HG22	1:C:71:VAL:HG13	1.66	0.76
3:M:3:VAL:HB	3:M:26:SER:HB3	1.67	0.76
1:C:111:LEU:HD23	1:C:111:LEU:N	2.00	0.76
4:N:99:SER:HA	4:N:106:GLU:OE2	1.86	0.76
1:C:44:PHE:HB3	6:C:138:HOH:O	1.84	0.76
4:H:198:VAL:HA	6:H:228:HOH:O	1.84	0.76
4:H:128:PRO:HB2	6:H:246:HOH:O	1.85	0.76
4:N:73:VAL:HB	4:N:76:ALA:HB3	1.65	0.76
3:L:53:TYR:CZ	3:L:57:ASN:HB3	2.21	0.76
3:L:174:ASP:OD1	3:L:176:THR:HG23	1.87	0.75
4:H:73:VAL:HB	4:H:76:ALA:HB3	1.66	0.75
1:D:104:ARG:HG3	6:D:139:HOH:O	1.87	0.75
3:L:80:ASN:ND2	3:L:81:PRO:HA	2.01	0.75
4:N:23:LYS:HD3	6:N:236:HOH:O	1.85	0.75
3:M:124:PRO:HB3	3:M:128:GLN:OE1	1.86	0.75
2:E:138:SER:HB2	2:E:144:LEU:HD13	1.68	0.75
1:B:104:ARG:O	1:B:122:VAL:HA	1.87	0.74
2:E:125:LEU:HD12	2:E:126:ASP:N	2.02	0.74
3:M:165:ASN:N	3:M:165:ASN:HD22	1.82	0.74
1:D:28:VAL:O	1:D:49:THR:HG23	1.87	0.74
4:H:70:LEU:HD11	4:H:81:MET:HG3	1.68	0.74
3:M:159:ARG:HG3	3:M:159:ARG:HH11	1.52	0.74
3:L:195:SER:HA	3:L:214:ASN:ND2	1.99	0.74
2:E:2:ARG:HB2	6:E:187:HOH:O	1.87	0.74
2:F:62:ARG:HG2	2:F:68:ASP:OD2	1.86	0.74
2:F:104:HIS:CE1	2:F:117:GLN:HG3	2.22	0.74
3:L:135:SER:HA	3:L:183:LEU:O	1.86	0.74
3:M:174:ASP:OD1	3:M:176:THR:HG23	1.88	0.74
3:M:124:PRO:HD3	3:M:136:VAL:HG22	1.68	0.74
4:N:191:SER:HB2	6:N:253:HOH:O	1.88	0.74
1:D:31:HIS:CE1	1:D:46:SER:HB2	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:173:LYS:HG2	3:M:174:ASP:N	2.02	0.74
2:F:140:ASP:OD1	2:F:142:ASN:HB2	1.88	0.74
3:L:192:ARG:HH11	3:L:192:ARG:HG2	1.52	0.73
2:F:32:PRO:HB3	2:F:133:TYR:HB3	1.69	0.73
2:F:107:VAL:HB	2:F:116:VAL:O	1.87	0.73
2:E:122:LEU:HD23	2:E:131:ASP:HB2	1.70	0.73
1:B:11:PRO:HG3	1:B:60:THR:O	1.87	0.73
1:D:71:VAL:HB	1:D:93:VAL:CG2	2.15	0.73
3:M:164:LEU:HD21	4:N:174:VAL:HG21	1.71	0.73
4:N:189:PRO:O	4:N:192:PRO:HD2	1.87	0.73
4:N:193:ARG:NH1	4:N:194:PRO:HG3	2.03	0.73
2:E:32:PRO:HB3	2:E:133:TYR:HB3	1.71	0.73
2:F:116:VAL:HG21	6:F:184:HOH:O	1.89	0.73
1:D:97:ALA:HB3	6:D:144:HOH:O	1.89	0.73
4:H:40:ARG:O	4:H:43:GLN:HB2	1.89	0.72
2:E:10:ARG:C	2:E:10:ARG:HD2	2.14	0.72
4:N:40:ARG:O	4:N:43:GLN:HB2	1.89	0.72
1:A:111:LEU:HD23	1:A:111:LEU:N	2.04	0.72
3:M:163:VAL:HG12	3:M:165:ASN:HD21	1.54	0.72
4:N:35:HIS:ND1	4:N:50:GLY:HA3	2.05	0.72
4:N:99:SER:HA	4:N:106:GLU:CD	2.15	0.72
1:C:32:VAL:HA	1:C:70:LYS:O	1.89	0.72
3:L:124:PRO:HG3	3:L:135:SER:C	2.15	0.72
4:H:33:TRP:O	4:H:34:MET:HB2	1.89	0.72
4:H:193:ARG:NH1	4:H:194:PRO:HG3	2.05	0.72
1:D:104:ARG:O	1:D:122:VAL:HA	1.89	0.72
3:L:117:PRO:HB3	3:L:143:PHE:HB3	1.71	0.72
3:M:124:PRO:HG3	3:M:135:SER:C	2.14	0.72
1:A:74:ASP:OD2	1:A:77:SER:HB2	1.87	0.72
1:B:12:LEU:HG	1:B:58:LEU:HD12	1.71	0.72
2:E:166:ARG:HD3	6:M:219:HOH:O	1.89	0.72
2:E:115:ALA:HB3	2:E:137:PHE:HB2	1.71	0.72
4:H:62:GLN:HA	4:H:65:LYS:HG3	1.70	0.72
1:C:30:VAL:HG13	6:C:154:HOH:O	1.88	0.72
4:H:10:VAL:HB	4:H:114:LEU:HD12	1.71	0.72
1:B:84:ILE:HG12	2:E:63:LEU:HD11	1.72	0.72
3:M:124:PRO:CD	3:M:136:VAL:HG22	2.20	0.72
2:E:63:LEU:C	2:E:63:LEU:HD23	2.14	0.71
3:M:53:TYR:CZ	3:M:57:ASN:HB3	2.24	0.71
3:M:147:ASP:HB3	6:M:246:HOH:O	1.89	0.71
4:N:204:HIS:NE2	4:N:206:ALA:HB3	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:163:ARG:HD2	6:F:179:HOH:O	1.90	0.71
3:L:187:LYS:HB3	3:L:187:LYS:NZ	2.04	0.71
3:M:183:LEU:HD12	6:M:255:HOH:O	1.90	0.71
1:A:16:VAL:CG2	1:A:25:ALA:HB3	2.19	0.71
1:C:60:THR:CG2	1:C:63:GLU:HB2	2.21	0.71
3:L:173:LYS:HG2	3:L:174:ASP:N	2.05	0.71
3:M:41:GLN:HB2	3:M:51:LEU:HD11	1.72	0.71
4:N:22:CYS:SG	6:N:227:HOH:O	2.48	0.71
1:C:98:ASN:ND2	1:C:102:PRO:HA	2.04	0.71
3:M:210:VAL:HG13	6:M:237:HOH:O	1.89	0.71
2:E:147:GLU:O	2:E:151:ILE:HG12	1.89	0.71
3:L:15:LEU:N	3:L:110:ILE:HD11	2.05	0.71
1:B:79:TRP:HA	1:B:79:TRP:CE3	2.25	0.71
2:F:115:ALA:HB3	2:F:137:PHE:HB2	1.73	0.71
3:M:187:LYS:HB3	3:M:187:LYS:HZ2	1.55	0.71
4:N:101:PHE:HA	6:N:237:HOH:O	1.91	0.71
1:A:100:SER:HB2	2:E:91:TRP:CD2	2.25	0.71
1:D:35:LYS:HB3	1:D:68:ILE:HB	1.73	0.71
3:L:163:VAL:HG12	3:L:165:ASN:HD21	1.55	0.71
3:M:6:GLN:HG3	3:M:105:GLY:N	2.06	0.71
4:N:143:LEU:HD12	6:N:257:HOH:O	1.89	0.71
4:N:182:LEU:HD23	4:N:183:SER:N	2.05	0.71
4:H:102:ASP:HB2	6:H:218:HOH:O	1.91	0.71
1:B:82:LEU:N	1:B:82:LEU:HD23	2.04	0.70
4:H:97:THR:HB	4:H:107:ASP:O	1.91	0.70
3:M:80:ASN:ND2	3:M:81:PRO:HA	2.03	0.70
1:A:32:VAL:HA	1:A:70:LYS:O	1.91	0.70
1:C:40:THR:HG22	1:C:41:TRP:N	2.07	0.70
3:L:191:GLU:HB3	3:L:215:ARG:NH2	2.06	0.70
4:N:51:VAL:O	4:N:53:PRO:HD3	1.91	0.70
1:A:40:THR:HG22	1:A:41:TRP:N	2.06	0.70
2:F:152:VAL:HA	6:F:184:HOH:O	1.90	0.70
3:L:3:VAL:HB	3:L:26:SER:HB3	1.73	0.70
4:H:164:LEU:HD23	4:H:186:VAL:HG21	1.73	0.70
4:H:191:SER:OG	4:H:192:PRO:HD3	1.90	0.70
1:C:82:LEU:C	6:C:151:HOH:O	2.33	0.70
3:L:181:SER:O	6:L:236:HOH:O	2.08	0.70
2:F:12:LYS:HG2	6:F:186:HOH:O	1.90	0.70
1:B:71:VAL:HB	1:B:93:VAL:CG2	2.21	0.70
4:H:140:MET:HE3	4:H:189:PRO:HG3	1.73	0.70
3:M:136:VAL:HG23	6:M:236:HOH:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:104:GLY:O	4:H:105:ASN:CG	2.34	0.70
2:F:79:ASP:HB2	6:F:192:HOH:O	1.92	0.69
3:M:15:LEU:N	3:M:110:ILE:HD11	2.06	0.69
2:E:2:ARG:HD3	6:E:187:HOH:O	1.91	0.69
3:M:112:ARG:CG	3:M:113:ALA:H	1.99	0.69
1:B:124:ASN:HB3	1:B:125:PRO:CD	2.23	0.69
3:L:133:GLY:O	6:L:222:HOH:O	2.10	0.69
3:L:173:LYS:HG2	3:L:174:ASP:H	1.57	0.69
4:N:44:GLY:O	4:N:45:LEU:HD23	1.93	0.69
1:A:98:ASN:HD22	1:A:102:PRO:HA	1.57	0.69
2:F:129:CYS:SG	2:F:132:SER:HB3	2.32	0.69
1:C:93:VAL:HG11	1:C:107:ILE:CD1	2.22	0.69
1:D:73:ILE:N	1:D:73:ILE:HD12	2.07	0.69
2:E:109:THR:HA	2:E:114:TYR:CE1	2.27	0.69
1:A:61:GLU:HG3	6:A:142:HOH:O	1.91	0.69
1:B:68:ILE:HD13	1:B:96:THR:HG23	1.74	0.69
1:C:59:THR:HG21	1:C:64:PHE:HB2	1.73	0.69
1:C:98:ASN:HD21	1:C:103:ARG:H	1.41	0.69
2:F:63:LEU:HD23	2:F:64:LEU:HB2	1.75	0.69
4:N:156:THR:OG1	4:N:203:ALA:HB3	1.93	0.69
1:A:93:VAL:HG11	1:A:107:ILE:HD13	1.74	0.69
4:H:182:LEU:HD23	4:H:183:SER:N	2.08	0.69
4:N:58:THR:HA	6:N:240:HOH:O	1.93	0.69
4:N:62:GLN:HA	4:N:65:LYS:HG3	1.75	0.69
2:F:16:ASP:OD1	2:F:19:ARG:HG3	1.92	0.69
1:A:40:THR:HG22	1:A:41:TRP:H	1.58	0.68
1:A:112:SER:HB2	6:D:146:HOH:O	1.92	0.68
4:N:197:THR:CG2	4:N:214:LYS:HE2	2.22	0.68
3:L:128:GLN:NE2	3:L:135:SER:CB	2.41	0.68
1:B:79:TRP:HA	1:B:79:TRP:HE3	1.58	0.68
1:C:40:THR:HG22	1:C:41:TRP:H	1.59	0.68
3:L:39:TRP:CZ3	3:L:92:CYS:HB3	2.29	0.68
1:D:63:GLU:O	1:D:65:VAL:HG13	1.93	0.68
2:F:121:ARG:HG2	2:F:121:ARG:HH21	1.58	0.68
3:L:165:ASN:N	3:L:165:ASN:ND2	2.39	0.68
4:H:35:HIS:ND1	4:H:50:GLY:HA3	2.09	0.68
4:H:51:VAL:O	4:H:53:PRO:HD3	1.93	0.68
1:D:34:ARG:HE	1:D:65:VAL:CG2	2.07	0.68
2:E:63:LEU:HD23	2:E:64:LEU:HB2	1.76	0.68
2:E:163:ARG:HA	4:N:102:ASP:O	1.93	0.68
3:L:159:ARG:HG3	3:L:159:ARG:HH11	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:121:ARG:CB	2:E:131:ASP:HB3	2.22	0.67
2:F:63:LEU:HD23	2:F:63:LEU:C	2.19	0.67
3:M:166:SER:O	6:M:262:HOH:O	2.12	0.67
4:N:22:CYS:H	4:N:78:THR:HG23	1.59	0.67
4:N:34:MET:O	6:N:228:HOH:O	2.12	0.67
1:A:12:LEU:HD22	1:A:58:LEU:HD12	1.77	0.67
1:D:79:TRP:HA	1:D:79:TRP:CE3	2.29	0.67
2:E:121:ARG:O	2:E:122:LEU:HD13	1.93	0.67
3:M:13:VAL:O	3:M:110:ILE:HD12	1.94	0.67
2:F:63:LEU:HD23	2:F:64:LEU:N	2.10	0.67
2:F:109:THR:HA	2:F:114:TYR:CE1	2.30	0.67
3:L:124:PRO:HG3	3:L:135:SER:O	1.94	0.67
2:F:146:PRO:O	6:F:194:HOH:O	2.12	0.67
3:M:12:ALA:HB2	3:M:109:GLU:HG2	1.76	0.67
4:H:41:PRO:HD3	6:H:249:HOH:O	1.94	0.67
4:H:129:LEU:HG	6:H:252:HOH:O	1.94	0.67
3:M:15:LEU:H	3:M:110:ILE:HD11	1.59	0.67
4:N:164:LEU:HD23	4:N:186:VAL:HG21	1.75	0.67
1:B:27:ASN:OD1	1:B:48:LYS:HD3	1.94	0.67
1:C:12:LEU:HD22	1:C:58:LEU:HD12	1.77	0.67
2:E:63:LEU:HD23	2:E:64:LEU:N	2.09	0.67
1:A:63:GLU:O	1:A:65:VAL:HG13	1.94	0.67
3:L:2:ILE:HG12	3:L:27:GLU:HB2	1.77	0.66
4:H:214:LYS:HG2	4:H:215:ILE:N	2.09	0.66
2:E:117:GLN:O	2:E:134:SER:HB2	1.94	0.66
2:F:117:GLN:O	2:F:134:SER:HB2	1.94	0.66
4:H:136:GLN:HG3	6:H:243:HOH:O	1.95	0.66
4:N:22:CYS:H	4:N:78:THR:CG2	2.09	0.66
4:H:44:GLY:O	4:H:45:LEU:HD23	1.94	0.66
3:M:179:MET:HE3	6:M:263:HOH:O	1.95	0.66
1:A:29:ALA:HA	1:A:48:LYS:HG2	1.77	0.66
4:N:173:ALA:O	4:N:174:VAL:HG13	1.96	0.66
2:E:140:ASP:OD1	2:E:142:ASN:HB2	1.95	0.66
4:N:14:PRO:HD3	4:N:117:SER:O	1.95	0.66
4:N:33:TRP:O	4:N:34:MET:HB2	1.95	0.66
3:M:179:MET:HB2	6:M:263:HOH:O	1.94	0.66
4:N:174:VAL:HG22	4:N:181:THR:O	1.95	0.66
2:E:167:LEU:HD23	2:E:168:ILE:N	2.10	0.66
3:M:202:HIS:CE1	6:M:245:HOH:O	2.49	0.66
2:E:132:SER:O	6:E:190:HOH:O	2.12	0.66
4:H:110:GLN:H	4:H:110:GLN:NE2	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:149:GLN:NE2	4:H:52:TYR:OH	2.28	0.66
2:E:76:THR:HG22	6:E:201:HOH:O	1.95	0.66
2:E:102:ASP:CG	2:E:121:ARG:HH22	2.04	0.66
2:E:166:ARG:NH1	3:M:57:ASN:ND2	2.44	0.66
3:M:124:PRO:HG3	3:M:135:SER:O	1.96	0.66
1:A:26:ILE:HD12	1:A:26:ILE:H	1.60	0.65
3:M:173:LYS:CG	3:M:174:ASP:N	2.58	0.65
4:N:105:ASN:C	4:N:106:GLU:CD	2.64	0.65
1:A:108:ALA:HB3	1:A:119:THR:HG23	1.79	0.65
4:N:10:VAL:HB	4:N:114:LEU:HD12	1.79	0.65
4:N:77:SER:HB3	6:N:252:HOH:O	1.95	0.65
4:H:98:ARG:HG2	4:H:99:SER:N	2.10	0.65
2:F:12:LYS:HE2	6:F:186:HOH:O	1.97	0.65
3:L:31:SER:O	3:L:33:GLY:N	2.30	0.65
3:L:15:LEU:H	3:L:110:ILE:HD11	1.61	0.65
4:H:198:VAL:O	4:H:215:ILE:HG12	1.95	0.65
1:A:17:LEU:HB2	1:A:110:LEU:CD1	2.26	0.65
1:B:35:LYS:HB3	1:B:68:ILE:HB	1.79	0.65
2:E:47:VAL:HG23	2:E:52:GLN:O	1.96	0.65
3:M:117:PRO:HD3	6:M:245:HOH:O	1.96	0.65
1:A:83:GLY:O	2:F:66:ASN:O	2.14	0.65
1:D:10:CYS:O	6:D:139:HOH:O	2.14	0.65
1:D:16:VAL:C	1:D:17:LEU:HD22	2.22	0.65
1:A:60:THR:CG2	1:A:63:GLU:HB2	2.27	0.65
1:D:84:ILE:O	1:D:86:PRO:HD3	1.97	0.65
2:E:24:TRP:CH2	2:E:139:ARG:HG2	2.32	0.64
2:F:147:GLU:O	2:F:151:ILE:HG12	1.97	0.64
4:H:34:MET:HA	4:H:98:ARG:HA	1.77	0.64
3:M:149:ASN:HB3	3:M:201:THR:HB	1.79	0.64
2:E:83:PRO:HA	6:E:184:HOH:O	1.95	0.64
3:M:140:LEU:HD21	3:M:150:VAL:HG22	1.79	0.64
1:C:26:ILE:HD12	1:C:26:ILE:H	1.63	0.64
4:H:51:VAL:HG12	4:H:58:THR:HG22	1.78	0.64
3:M:110:ILE:HD12	3:M:111:LYS:H	1.63	0.64
4:N:83:LEU:HB3	4:N:86:LEU:HD21	1.79	0.64
1:D:11:PRO:HG3	1:D:60:THR:O	1.98	0.64
2:E:11:VAL:HG22	2:E:12:LYS:H	1.63	0.64
4:H:193:ARG:HG2	4:H:193:ARG:HH11	1.62	0.64
4:N:173:ALA:HA	6:N:256:HOH:O	1.96	0.64
1:B:22:GLY:HA3	1:C:114:TYR:CD2	2.28	0.64
2:E:80:THR:C	2:E:82:ASP:H	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:55:ALA:O	3:M:56:SER:HB3	1.95	0.64
1:D:11:PRO:HG2	1:D:12:LEU:H	1.63	0.63
2:F:39:ASP:OD2	2:F:60:ARG:CZ	2.46	0.63
2:F:112:ASP:OD2	2:F:113:THR:HG23	1.98	0.63
4:H:2:VAL:HG11	4:H:107:ASP:OD2	1.98	0.63
4:N:51:VAL:HA	6:N:240:HOH:O	1.98	0.63
4:N:176:GLN:HG2	6:N:217:HOH:O	1.96	0.63
3:M:187:LYS:HB3	3:M:187:LYS:NZ	2.13	0.63
1:A:20:VAL:O	1:D:113:PRO:HB2	1.98	0.63
1:D:16:VAL:CG1	1:D:111:LEU:HD11	2.28	0.63
4:N:34:MET:HA	4:N:98:ARG:HA	1.79	0.63
3:L:192:ARG:HD3	3:L:193:HIS:HE1	1.63	0.63
4:N:10:VAL:HB	4:N:114:LEU:CD1	2.28	0.63
1:A:59:THR:OG1	1:A:60:THR:N	2.31	0.63
1:B:83:GLY:HA3	2:E:35:LEU:CD1	2.29	0.63
1:C:72:GLU:HG3	1:C:92:GLU:HG2	1.80	0.63
1:D:93:VAL:HG21	1:D:107:ILE:HG21	1.81	0.63
1:C:82:LEU:CB	6:C:151:HOH:O	2.46	0.63
4:H:22:CYS:H	4:H:78:THR:HG23	1.63	0.63
3:M:114:ASP:OD1	3:M:145:PRO:HD3	1.98	0.63
3:M:192:ARG:HG2	3:M:192:ARG:HH11	1.62	0.63
4:N:51:VAL:HG12	4:N:58:THR:HG22	1.81	0.63
4:N:197:THR:HG23	4:N:214:LYS:HE2	1.78	0.63
1:B:93:VAL:HG21	1:B:107:ILE:HG21	1.80	0.63
4:H:10:VAL:HB	4:H:114:LEU:CD1	2.29	0.63
3:M:140:LEU:HD23	3:M:148:ILE:HD13	1.81	0.63
1:B:89:GLU:O	1:B:90:HIS:HB3	1.98	0.63
1:D:57:GLY:HA3	6:D:128:HOH:O	1.98	0.63
1:D:79:TRP:HA	1:D:79:TRP:HE3	1.63	0.63
3:L:18:ARG:HB2	3:L:80:ASN:HB2	1.80	0.63
4:N:23:LYS:HD2	6:N:252:HOH:O	1.98	0.63
2:F:11:VAL:HG22	2:F:12:LYS:N	2.14	0.62
3:M:198:CYS:C	6:M:237:HOH:O	2.42	0.62
1:C:60:THR:HG23	1:C:63:GLU:HB2	1.81	0.62
3:L:13:VAL:O	3:L:110:ILE:HD12	1.99	0.62
4:N:27:TYR:HD2	4:N:32:TYR:CD2	2.16	0.62
1:C:12:LEU:HD23	1:C:13:MET:N	2.14	0.62
2:F:159:LEU:O	2:F:161:LEU:HG	1.99	0.62
3:L:125:SER:HB3	6:L:248:HOH:O	1.99	0.62
1:A:7:GLU:N	6:A:136:HOH:O	2.33	0.62
2:F:72:ASP:O	2:F:93:VAL:HG23	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:138:SER:HB2	2:F:144:LEU:HD13	1.81	0.62
3:L:6:GLN:HG3	3:L:105:GLY:N	2.14	0.62
3:L:110:ILE:HG21	3:L:175:SER:HB3	1.81	0.62
3:M:170:GLN:HB2	6:M:216:HOH:O	1.98	0.62
2:E:32:PRO:HD3	2:E:133:TYR:HB2	1.81	0.62
2:E:125:LEU:HD12	2:E:126:ASP:H	1.63	0.62
4:H:173:ALA:O	4:H:174:VAL:HG13	1.99	0.62
2:E:32:PRO:N	6:E:190:HOH:O	2.31	0.62
4:H:18:VAL:CG2	4:H:83:LEU:HB2	2.29	0.62
1:B:9:LYS:HZ2	1:B:9:LYS:HB3	1.65	0.62
1:B:59:THR:CG2	1:B:64:PHE:HB2	2.30	0.62
1:B:116:TYR:CD1	1:B:116:TYR:C	2.78	0.62
2:E:65:ASN:C	2:E:67:TRP:H	2.05	0.62
3:L:149:ASN:HB3	3:L:201:THR:HB	1.82	0.62
3:L:181:SER:C	6:L:236:HOH:O	2.42	0.62
4:H:192:PRO:HB3	6:H:240:HOH:O	1.99	0.62
3:M:19:ALA:HB3	3:M:79:ILE:HB	1.82	0.62
2:F:6:VAL:O	2:F:9:PHE:HB2	1.99	0.62
3:M:194:ASN:HA	3:M:215:ARG:HB3	1.81	0.62
4:N:214:LYS:HG2	4:N:215:ILE:N	2.15	0.62
1:B:36:ALA:HB2	1:B:42:GLU:HG2	1.82	0.62
2:E:11:VAL:HG22	2:E:12:LYS:N	2.15	0.62
2:F:117:GLN:HE22	2:F:133:TYR:HE1	1.48	0.62
3:L:19:ALA:HB3	3:L:79:ILE:HB	1.80	0.62
4:H:189:PRO:HB2	4:H:192:PRO:HD3	1.80	0.62
4:N:70:LEU:CD1	4:N:81:MET:HG3	2.30	0.62
2:E:112:ASP:OD2	2:E:113:THR:HG23	2.00	0.61
3:L:195:SER:CA	3:L:214:ASN:HD22	2.03	0.61
3:M:39:TRP:CZ3	3:M:92:CYS:HB3	2.35	0.61
4:H:70:LEU:CD1	4:H:81:MET:HG3	2.30	0.61
1:A:60:THR:HG23	1:A:63:GLU:HB2	1.82	0.61
1:A:116:TYR:O	1:B:117:SER:HB2	2.00	0.61
2:E:11:VAL:HG23	2:E:107:VAL:HA	1.81	0.61
3:L:7:SER:CB	3:L:8:PRO:CD	2.79	0.61
4:H:14:PRO:HD3	4:H:117:SER:O	2.01	0.61
3:M:136:VAL:O	3:M:182:THR:HA	2.00	0.61
4:N:97:THR:HB	4:N:107:ASP:O	2.00	0.61
2:F:124:ASN:HB2	2:F:128:THR:O	2.00	0.61
3:L:129:LEU:C	3:L:131:SER:H	2.09	0.61
2:E:136:VAL:HG11	2:E:152:VAL:HG11	1.82	0.61
2:F:117:GLN:HG2	2:F:118:TYR:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:80:THR:HG22	2:E:85:LYS:O	2.00	0.61
2:E:167:LEU:HB2	4:N:103:TYR:OH	2.01	0.61
3:L:125:SER:OG	3:L:126:SER:N	2.34	0.61
4:H:135:ALA:O	4:H:136:GLN:O	2.19	0.61
4:N:20:MET:HB3	6:N:241:HOH:O	1.99	0.61
4:N:33:TRP:HZ3	6:N:240:HOH:O	1.84	0.61
1:C:17:LEU:HB2	1:C:110:LEU:HD13	1.83	0.61
2:F:32:PRO:HD3	2:F:133:TYR:HB2	1.83	0.61
2:F:65:ASN:C	2:F:67:TRP:H	2.08	0.61
3:L:124:PRO:HB3	3:L:128:GLN:OE1	2.01	0.61
4:N:135:ALA:O	4:N:136:GLN:O	2.18	0.61
4:N:182:LEU:HD23	4:N:182:LEU:C	2.25	0.61
1:B:38:ASP:O	1:B:39:ASP:HB2	1.98	0.61
2:F:152:VAL:HG13	6:F:184:HOH:O	2.01	0.61
3:L:66:PHE:HA	3:L:78:THR:O	2.01	0.61
2:E:124:ASN:HB2	2:E:128:THR:O	2.01	0.61
2:F:25:TYR:CE2	2:F:141:PRO:HD3	2.36	0.60
3:L:121:ILE:HD12	3:L:198:CYS:HB3	1.83	0.60
3:L:188:ASP:C	3:L:190:TYR:H	2.08	0.60
3:M:4:LEU:HD12	3:M:102:PHE:C	2.26	0.60
3:M:58:LEU:HD11	3:M:62:ILE:HB	1.82	0.60
3:M:144:TYR:O	3:M:202:HIS:HE1	1.84	0.60
3:L:93:GLN:HE21	3:L:94:GLN:C	2.08	0.60
3:M:129:LEU:C	3:M:131:SER:H	2.09	0.60
1:B:60:THR:OG1	1:B:63:GLU:HG3	2.00	0.60
2:F:118:TYR:HE1	2:F:120:CYS:HB2	1.65	0.60
3:L:129:LEU:HD23	6:L:222:HOH:O	2.01	0.60
3:M:31:SER:O	3:M:33:GLY:N	2.34	0.60
3:M:165:ASN:N	3:M:165:ASN:ND2	2.49	0.60
4:N:133:SER:C	4:N:135:ALA:H	2.10	0.60
2:F:152:VAL:HG12	2:F:156:GLN:HE21	1.65	0.60
3:M:118:THR:N	6:M:228:HOH:O	2.33	0.60
2:E:38:GLN:HG3	2:E:61:VAL:HA	1.84	0.60
2:F:121:ARG:CB	2:F:131:ASP:HB3	2.28	0.60
3:L:194:ASN:O	3:L:214:ASN:HB3	2.02	0.60
3:M:183:LEU:O	6:M:236:HOH:O	2.16	0.60
2:F:112:ASP:O	2:F:139:ARG:HG3	2.02	0.60
3:L:124:PRO:CD	3:L:136:VAL:HG22	2.32	0.60
2:E:117:GLN:HG2	2:E:118:TYR:N	2.15	0.60
2:F:80:THR:C	2:F:82:ASP:H	2.10	0.60
4:H:193:ARG:NH1	4:H:193:ARG:HG2	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:N:98:ARG:HG2	4:N:99:SER:N	2.15	0.60
1:D:63:GLU:N	6:D:153:HOH:O	2.24	0.60
1:D:34:ARG:HH11	1:D:34:ARG:HG2	1.67	0.59
1:A:113:PRO:HG2	1:D:20:VAL:HA	1.84	0.59
1:B:73:ILE:N	1:B:73:ILE:HD12	2.16	0.59
2:E:116:VAL:HG22	2:E:136:VAL:HG13	1.85	0.59
3:L:155:ASP:C	3:L:157:SER:H	2.09	0.59
2:F:47:VAL:HG23	2:F:52:GLN:O	2.01	0.59
4:N:174:VAL:CG2	4:N:181:THR:O	2.50	0.59
2:F:80:THR:HG22	2:F:85:LYS:O	2.01	0.59
4:H:61:ASN:ND2	4:H:63:LYS:HB3	2.18	0.59
3:M:3:VAL:CB	3:M:26:SER:HB3	2.32	0.59
1:A:84:ILE:O	1:A:86:PRO:HD3	2.03	0.59
1:D:83:GLY:CA	2:F:35:LEU:HD12	2.31	0.59
1:C:98:ASN:ND2	1:C:103:ARG:H	2.00	0.59
1:D:7:GLU:HG3	1:D:8:SER:H	1.68	0.59
2:E:6:VAL:O	2:E:9:PHE:HB2	2.03	0.59
2:E:152:VAL:HG12	2:E:156:GLN:HE21	1.65	0.59
2:F:125:LEU:HD12	2:F:126:ASP:H	1.68	0.59
3:L:164:LEU:C	3:L:165:ASN:HD22	2.10	0.59
4:N:159:TRP:CZ3	4:N:200:CYS:HB2	2.37	0.59
3:L:138:CYS:N	6:L:236:HOH:O	2.33	0.59
3:L:163:VAL:HB	6:L:247:HOH:O	2.01	0.59
4:H:98:ARG:NH1	6:H:216:HOH:O	2.36	0.59
1:A:68:ILE:N	1:A:68:ILE:HD12	2.18	0.58
1:A:102:PRO:HB3	6:A:138:HOH:O	2.01	0.58
1:B:63:GLU:O	1:B:65:VAL:HG13	2.02	0.58
3:L:191:GLU:HB3	3:L:215:ARG:HH21	1.67	0.58
4:N:151:PHE:CD1	4:N:152:PRO:HA	2.38	0.58
2:E:6:VAL:HA	2:E:9:PHE:CD1	2.37	0.58
3:L:140:LEU:HD21	3:L:150:VAL:HG22	1.85	0.58
3:M:117:PRO:HB3	3:M:143:PHE:CB	2.30	0.58
3:M:155:ASP:C	3:M:157:SER:H	2.10	0.58
3:M:171:ASP:CG	3:M:172:SER:H	2.12	0.58
1:D:35:LYS:CB	1:D:68:ILE:HB	2.34	0.58
1:D:89:GLU:O	1:D:90:HIS:HB3	2.04	0.58
2:F:72:ASP:HB3	2:F:93:VAL:HG23	1.84	0.58
4:H:201:ASN:HB3	4:H:212:ASP:OD1	2.04	0.58
3:M:123:PRO:HB3	3:M:213:PHE:CE2	2.37	0.58
1:C:55:LEU:C	1:C:55:LEU:HD13	2.28	0.58
2:F:162:ALA:O	2:F:163:ARG:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:134:ALA:HB3	3:M:185:LEU:HB2	1.85	0.58
3:M:191:GLU:HA	3:M:215:ARG:NH2	2.18	0.58
4:H:105:ASN:C	4:H:106:GLU:CD	2.72	0.58
4:N:133:SER:C	4:N:135:ALA:N	2.60	0.58
2:E:25:TYR:CD1	2:E:141:PRO:HB3	2.39	0.58
3:L:38:HIS:CG	4:H:105:ASN:HD21	2.22	0.58
3:L:124:PRO:HD3	3:L:136:VAL:HG22	1.85	0.58
4:H:205:PRO:HG2	4:H:206:ALA:H	1.68	0.58
1:B:12:LEU:HD12	1:B:13:MET:N	2.18	0.58
1:D:36:ALA:HB2	1:D:42:GLU:HG2	1.86	0.58
2:F:155:ARG:O	2:F:158:GLU:HB2	2.04	0.58
3:L:7:SER:HB3	3:L:8:PRO:CD	2.34	0.58
3:L:136:VAL:O	3:L:182:THR:HA	2.03	0.58
4:H:133:SER:C	4:H:135:ALA:H	2.10	0.58
1:A:82:LEU:C	2:F:67:TRP:HZ3	2.11	0.58
4:H:175:LEU:HG	4:H:177:SER:O	2.04	0.58
3:M:89:THR:HA	3:M:106:THR:O	2.04	0.58
3:M:194:ASN:O	3:M:214:ASN:HB3	2.04	0.58
1:B:12:LEU:HG	1:B:58:LEU:CD1	2.33	0.58
2:E:31:ASP:HB2	2:E:166:ARG:HH21	1.68	0.58
3:M:163:VAL:CG1	3:M:165:ASN:HD21	2.17	0.58
4:N:35:HIS:HB2	6:N:255:HOH:O	2.04	0.58
4:N:132:GLY:O	4:N:133:SER:HB2	2.03	0.58
1:B:34:ARG:HE	1:B:65:VAL:CG2	2.16	0.57
2:E:114:TYR:C	2:E:114:TYR:CD1	2.81	0.57
3:M:7:SER:CB	3:M:8:PRO:CD	2.82	0.57
3:M:137:VAL:HG22	3:M:182:THR:OG1	2.02	0.57
3:M:188:ASP:C	3:M:190:TYR:H	2.12	0.57
2:E:41:ILE:N	2:E:41:ILE:HD12	2.19	0.57
3:L:7:SER:OG	3:L:8:PRO:HD3	2.04	0.57
3:M:70:GLY:HA3	3:M:75:PHE:CD2	2.39	0.57
3:M:179:MET:CG	6:M:263:HOH:O	2.53	0.57
1:B:59:THR:HG21	1:B:64:PHE:HB2	1.87	0.57
1:B:84:ILE:O	1:B:86:PRO:HD3	2.05	0.57
2:E:166:ARG:CD	6:M:219:HOH:O	2.50	0.57
2:F:41:ILE:HD12	2:F:41:ILE:N	2.19	0.57
4:H:61:ASN:HD21	4:H:63:LYS:HB3	1.69	0.57
4:N:41:PRO:C	4:N:43:GLN:H	2.11	0.57
1:C:16:VAL:CG2	1:C:25:ALA:HB3	2.32	0.57
2:F:39:ASP:OD2	2:F:60:ARG:NH2	2.37	0.57
3:L:121:ILE:HD12	3:L:198:CYS:CB	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:VAL:HG23	1:A:66:GLU:O	2.04	0.57
2:E:159:LEU:O	2:E:161:LEU:HG	2.05	0.57
4:H:29:PHE:CD2	4:H:77:SER:HA	2.39	0.57
3:M:21:ILE:O	3:M:76:THR:HG23	2.05	0.57
3:M:36:PHE:HD2	3:M:96:ASN:HA	1.69	0.57
4:N:61:ASN:ND2	4:N:63:LYS:HB3	2.20	0.57
1:A:32:VAL:HG22	1:A:71:VAL:HG13	1.87	0.57
4:H:41:PRO:C	4:H:43:GLN:H	2.12	0.57
2:F:114:TYR:CD1	2:F:114:TYR:C	2.83	0.57
2:F:118:TYR:CD1	2:F:119:SER:N	2.71	0.57
2:F:150:LYS:HB2	6:F:194:HOH:O	2.04	0.57
2:F:150:LYS:O	2:F:153:ARG:HB3	2.05	0.57
3:L:89:THR:HA	3:L:106:THR:O	2.03	0.57
4:H:93:VAL:HG22	4:H:113:THR:HG22	1.87	0.57
4:N:23:LYS:HA	4:N:78:THR:OG1	2.04	0.57
1:A:75:THR:HG23	1:A:91:ALA:H	1.69	0.57
1:C:68:ILE:N	1:C:68:ILE:HD12	2.20	0.57
2:E:80:THR:HG21	2:E:85:LYS:HB2	1.87	0.57
3:L:36:PHE:HD2	3:L:96:ASN:HA	1.70	0.57
4:H:55:ASP:C	4:H:57:HIS:H	2.11	0.57
3:M:195:SER:HA	3:M:214:ASN:ND2	2.06	0.57
4:N:18:VAL:CG2	4:N:83:LEU:HB2	2.30	0.57
1:A:72:GLU:HG3	1:A:92:GLU:HG2	1.86	0.57
3:L:190:TYR:CE2	3:L:215:ARG:HD2	2.40	0.57
3:M:38:HIS:CG	4:N:105:ASN:HD21	2.23	0.57
3:L:114:ASP:OD1	3:L:145:PRO:HD3	2.05	0.56
4:N:4:LEU:HD21	6:N:227:HOH:O	2.05	0.56
2:F:33:GLU:HB2	2:F:131:ASP:OD1	2.04	0.56
4:H:73:VAL:HG23	4:H:80:TYR:HE2	1.69	0.56
3:M:66:PHE:HA	3:M:78:THR:O	2.05	0.56
3:M:93:GLN:HE21	3:M:94:GLN:C	2.13	0.56
1:D:12:LEU:HG	1:D:58:LEU:CD1	2.34	0.56
1:D:59:THR:CG2	1:D:64:PHE:HB2	2.34	0.56
2:F:6:VAL:HG12	2:F:105:TRP:CH2	2.39	0.56
3:L:12:ALA:HB2	3:L:109:GLU:HG2	1.87	0.56
3:L:173:LYS:CG	3:L:174:ASP:N	2.68	0.56
4:H:83:LEU:HB3	4:H:86:LEU:HD21	1.87	0.56
4:H:153:GLU:HB3	4:H:154:PRO:HA	1.87	0.56
3:M:15:LEU:N	3:M:110:ILE:CD1	2.68	0.56
3:M:183:LEU:C	6:M:221:HOH:O	2.48	0.56
4:N:29:PHE:CD2	4:N:77:SER:HA	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:N:175:LEU:HG	4:N:177:SER:O	2.04	0.56
1:B:79:TRP:HE1	1:B:112:SER:C	2.13	0.56
3:L:130:THR:O	3:L:130:THR:HG22	2.06	0.56
4:H:13:ARG:HH21	4:H:117:SER:C	2.13	0.56
2:F:148:ALA:O	2:F:152:VAL:HG23	2.06	0.56
3:L:144:TYR:O	3:L:202:HIS:HE1	1.89	0.56
4:H:214:LYS:O	4:H:215:ILE:HD13	2.06	0.56
3:M:127:GLU:HG2	6:M:269:HOH:O	2.05	0.56
1:D:38:ASP:O	1:D:39:ASP:HB2	2.06	0.56
2:F:16:ASP:OD2	2:F:18:ALA:HB3	2.05	0.56
3:M:29:VAL:HG12	3:M:29:VAL:O	2.05	0.56
3:M:162:GLY:C	6:M:255:HOH:O	2.48	0.56
4:N:176:GLN:NE2	6:N:217:HOH:O	2.26	0.56
1:B:9:LYS:HB3	1:B:104:ARG:HH22	1.71	0.56
2:E:80:THR:O	2:E:82:ASP:N	2.38	0.56
2:E:107:VAL:HB	2:E:116:VAL:O	2.06	0.56
4:H:215:ILE:HA	6:H:246:HOH:O	2.05	0.56
2:E:122:LEU:HD23	2:E:131:ASP:CB	2.36	0.56
4:H:101:PHE:O	4:H:101:PHE:CG	2.59	0.56
1:B:28:VAL:HB	1:B:49:THR:HG21	1.88	0.56
1:B:83:GLY:HA2	6:B:138:HOH:O	2.05	0.56
4:N:37:ILE:HG12	6:N:255:HOH:O	2.05	0.56
4:N:147:VAL:HG23	6:N:235:HOH:O	2.05	0.56
2:E:31:ASP:C	6:E:190:HOH:O	2.49	0.56
2:E:104:HIS:CE1	2:E:117:GLN:HG3	2.40	0.56
4:N:33:TRP:CZ3	6:N:240:HOH:O	2.53	0.56
4:N:92:ALA:O	4:N:114:LEU:HB3	2.05	0.56
2:E:117:GLN:HE22	2:E:133:TYR:HE1	1.54	0.55
3:L:134:ALA:HB3	3:L:185:LEU:HB2	1.88	0.55
4:H:108:TRP:NE1	6:H:231:HOH:O	2.39	0.55
2:F:72:ASP:HB3	2:F:93:VAL:CG2	2.37	0.55
4:N:105:ASN:ND2	6:N:226:HOH:O	2.39	0.55
1:B:21:ARG:NH2	1:B:78:TYR:OH	2.39	0.55
1:B:84:ILE:HG23	2:E:96:PHE:HB2	1.87	0.55
1:D:11:PRO:HB2	1:D:64:PHE:HD2	1.70	0.55
2:E:46:SER:C	6:E:193:HOH:O	2.49	0.55
4:H:198:VAL:CG1	4:H:215:ILE:HG13	2.37	0.55
4:N:47:TRP:CE2	4:N:49:GLY:HA2	2.40	0.55
1:B:78:TYR:O	1:B:81:ALA:HB3	2.07	0.55
1:C:87:PHE:HB2	1:C:114:TYR:CE1	2.41	0.55
2:F:24:TRP:CH2	2:F:139:ARG:HG2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:34:ASN:HB3	6:L:237:HOH:O	2.06	0.55
4:H:55:ASP:C	4:H:57:HIS:N	2.60	0.55
4:H:103:TYR:CE2	6:H:218:HOH:O	2.53	0.55
3:M:164:LEU:C	3:M:165:ASN:HD22	2.15	0.55
1:C:104:ARG:HE	1:C:125:PRO:HA	1.70	0.55
2:E:163:ARG:HG2	4:N:102:ASP:O	2.06	0.55
3:L:159:ARG:HD3	6:L:240:HOH:O	2.07	0.55
3:M:18:ARG:HB2	3:M:80:ASN:HB2	1.87	0.55
1:B:16:VAL:CG1	1:B:111:LEU:HD11	2.37	0.55
1:C:67:GLY:HA2	6:C:153:HOH:O	2.06	0.55
1:D:79:TRP:HZ2	1:D:112:SER:HA	1.70	0.55
4:H:182:LEU:HD23	4:H:182:LEU:C	2.31	0.55
3:M:155:ASP:HA	3:M:195:SER:OG	2.06	0.55
4:N:39:GLN:OE1	4:N:45:LEU:HD21	2.07	0.55
4:N:77:SER:CB	6:N:252:HOH:O	2.53	0.55
4:H:125:SER:HB2	4:H:148:LYS:HB3	1.89	0.55
4:H:197:THR:HG23	4:H:214:LYS:HE2	1.88	0.55
1:D:27:ASN:OD1	1:D:48:LYS:HD3	2.07	0.55
2:E:102:ASP:CB	6:E:192:HOH:O	2.54	0.55
3:L:38:HIS:O	3:L:92:CYS:HA	2.07	0.55
4:H:106:GLU:HB2	6:H:216:HOH:O	2.07	0.55
4:H:204:HIS:NE2	4:H:206:ALA:HB3	2.22	0.55
3:M:123:PRO:O	3:M:124:PRO:C	2.49	0.55
4:N:22:CYS:C	4:N:78:THR:HG23	2.31	0.55
1:C:59:THR:CG2	1:C:64:PHE:HB2	2.36	0.55
3:L:93:GLN:NE2	3:L:94:GLN:O	2.37	0.55
4:N:35:HIS:N	4:N:97:THR:O	2.40	0.55
1:C:84:ILE:O	1:C:86:PRO:HD3	2.06	0.55
1:D:36:ALA:O	6:D:130:HOH:O	2.18	0.55
1:D:79:TRP:HE1	1:D:112:SER:C	2.15	0.55
2:F:63:LEU:CD2	2:F:64:LEU:HB2	2.37	0.55
1:A:114:TYR:CD2	1:D:22:GLY:CA	2.86	0.54
1:C:28:VAL:HB	1:C:49:THR:HG23	1.89	0.54
3:L:93:GLN:NE2	3:L:94:GLN:C	2.65	0.54
4:N:106:GLU:N	4:N:106:GLU:OE1	2.39	0.54
1:A:102:PRO:O	1:A:103:ARG:HG3	2.07	0.54
1:D:63:GLU:O	1:D:65:VAL:N	2.38	0.54
2:E:40:ASN:HD21	2:E:172:GLY:H	1.55	0.54
3:L:128:GLN:HB2	6:L:248:HOH:O	2.07	0.54
3:L:134:ALA:O	3:L:185:LEU:N	2.40	0.54
4:H:133:SER:C	4:H:135:ALA:N	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:151:PHE:CD1	4:H:152:PRO:HA	2.42	0.54
3:M:7:SER:HB3	3:M:8:PRO:CD	2.37	0.54
4:N:98:ARG:HD3	4:N:106:GLU:HG3	1.90	0.54
1:C:60:THR:HG23	1:C:63:GLU:N	2.12	0.54
4:H:124:PRO:HD3	4:H:204:HIS:ND1	2.23	0.54
3:M:191:GLU:HB3	3:M:215:ARG:NH2	2.21	0.54
4:N:153:GLU:HB3	4:N:154:PRO:HA	1.87	0.54
3:L:140:LEU:HD23	3:L:148:ILE:HD13	1.89	0.54
3:M:120:SER:O	3:M:138:CYS:HA	2.07	0.54
1:B:110:LEU:C	1:B:111:LEU:HD23	2.33	0.54
2:E:102:ASP:HB2	6:E:192:HOH:O	2.05	0.54
3:L:120:SER:O	3:L:138:CYS:HA	2.06	0.54
3:L:123:PRO:O	3:L:124:PRO:C	2.48	0.54
3:M:111:LYS:HD2	6:M:218:HOH:O	2.07	0.54
3:M:154:ILE:O	3:M:155:ASP:HB2	2.08	0.54
1:B:65:VAL:HG23	1:B:66:GLU:N	2.21	0.54
1:B:70:LYS:HG3	1:B:94:VAL:HG22	1.90	0.54
1:D:17:LEU:HD22	1:D:17:LEU:N	2.23	0.54
4:N:181:THR:O	6:N:256:HOH:O	2.19	0.54
2:F:30:LYS:HE3	2:F:161:LEU:HD22	1.90	0.54
3:M:7:SER:OG	3:M:8:PRO:HD3	2.07	0.54
3:M:13:VAL:HA	3:M:111:LYS:HE3	1.88	0.54
3:M:134:ALA:O	3:M:185:LEU:N	2.40	0.54
1:A:60:THR:HG23	1:A:63:GLU:N	2.16	0.54
2:F:2:ARG:O	2:F:3:ASP:HB2	2.08	0.54
4:H:159:TRP:CZ3	4:H:200:CYS:HB2	2.42	0.54
1:A:59:THR:HG21	1:A:64:PHE:HB2	1.89	0.54
3:L:192:ARG:HG2	3:L:192:ARG:NH1	2.23	0.54
4:H:143:LEU:HD21	4:H:193:ARG:HD3	1.90	0.54
4:H:156:THR:HA	6:H:247:HOH:O	2.07	0.54
2:F:16:ASP:O	2:F:17:LYS:C	2.49	0.53
3:M:125:SER:OG	3:M:126:SER:N	2.42	0.53
3:M:134:ALA:N	3:M:185:LEU:O	2.29	0.53
4:N:105:ASN:C	4:N:106:GLU:OE1	2.51	0.53
1:A:95:PHE:CD1	1:A:95:PHE:N	2.76	0.53
3:L:93:GLN:HG2	3:L:101:THR:O	2.08	0.53
4:H:100:GLY:HA3	4:H:103:TYR:CE1	2.43	0.53
4:H:193:ARG:HD2	4:H:198:VAL:HG21	1.89	0.53
3:M:134:ALA:O	3:M:184:THR:HA	2.08	0.53
4:N:137:THR:O	4:N:139:SER:N	2.41	0.53
2:E:2:ARG:O	2:E:3:ASP:HB2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:110:ILE:HG21	3:M:175:SER:HB3	1.89	0.53
3:M:197:THR:HG22	6:M:237:HOH:O	2.09	0.53
1:C:113:PRO:O	1:C:114:TYR:HD1	1.91	0.53
2:F:8:SER:O	2:F:9:PHE:C	2.52	0.53
2:F:11:VAL:HG22	2:F:12:LYS:H	1.72	0.53
3:L:15:LEU:N	3:L:110:ILE:CD1	2.71	0.53
3:L:67:SER:HA	6:L:216:HOH:O	2.08	0.53
3:M:192:ARG:HD3	3:M:193:HIS:HE1	1.74	0.53
1:A:18:ASP:OD1	1:A:78:TYR:HE2	1.91	0.53
1:A:98:ASN:ND2	1:A:102:PRO:HA	2.21	0.53
3:L:127:GLU:O	3:L:127:GLU:HG2	2.09	0.53
4:H:35:HIS:N	4:H:97:THR:O	2.41	0.53
3:M:164:LEU:HD21	4:N:174:VAL:CG2	2.39	0.53
4:N:171:PHE:O	4:N:182:LEU:HG	2.08	0.53
3:M:135:SER:CB	6:M:221:HOH:O	2.55	0.53
3:M:153:LYS:HD2	3:M:199:GLU:CD	2.34	0.53
2:E:121:ARG:HG2	2:E:121:ARG:HH21	1.74	0.53
2:E:129:CYS:SG	2:E:132:SER:HB3	2.48	0.53
3:M:69:SER:HB2	6:M:230:HOH:O	2.09	0.53
4:N:125:SER:HB2	4:N:148:LYS:HB3	1.90	0.53
1:C:28:VAL:HB	1:C:49:THR:CG2	2.39	0.53
1:D:53:GLY:HA2	6:D:136:HOH:O	2.07	0.53
1:D:87:PHE:HB2	1:D:114:TYR:CD2	2.43	0.53
1:D:110:LEU:C	1:D:111:LEU:HD23	2.33	0.53
2:E:118:TYR:HE1	2:E:120:CYS:HB2	1.73	0.53
2:E:109:THR:CA	2:E:114:TYR:CE1	2.92	0.53
3:L:70:GLY:HA3	3:L:75:PHE:CD2	2.44	0.53
3:M:140:LEU:HD23	3:M:148:ILE:CD1	2.38	0.53
3:M:157:SER:HB2	6:M:254:HOH:O	2.07	0.53
3:M:187:LYS:O	3:M:190:TYR:HB3	2.09	0.53
4:N:6:GLU:CG	6:N:227:HOH:O	2.57	0.53
1:A:85:SER:N	2:F:66:ASN:HD21	2.07	0.53
1:C:59:THR:OG1	1:C:60:THR:N	2.37	0.53
1:D:39:ASP:HA	6:D:130:HOH:O	2.09	0.53
3:M:38:HIS:CG	4:N:105:ASN:ND2	2.77	0.53
1:D:72:GLU:HG3	1:D:90:HIS:CD2	2.44	0.52
2:E:16:ASP:OD2	2:E:18:ALA:HB3	2.09	0.52
3:L:163:VAL:CG1	3:L:165:ASN:HD21	2.21	0.52
3:M:127:GLU:CG	6:M:269:HOH:O	2.56	0.52
3:M:171:ASP:CG	3:M:172:SER:N	2.67	0.52
1:D:124:ASN:CB	1:D:125:PRO:HD3	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:32:PRO:HD3	2:E:133:TYR:CB	2.40	0.52
2:E:63:LEU:CD2	2:E:64:LEU:HB2	2.38	0.52
2:E:121:ARG:C	2:E:122:LEU:HD22	2.35	0.52
2:F:121:ARG:HG2	2:F:121:ARG:NH2	2.23	0.52
4:H:137:THR:O	4:H:139:SER:N	2.41	0.52
4:H:214:LYS:CG	4:H:215:ILE:H	2.18	0.52
3:M:46:GLN:HB3	3:M:47:PRO:HD2	1.92	0.52
4:N:126:VAL:HA	4:N:146:LEU:O	2.09	0.52
1:B:7:GLU:HG3	1:B:8:SER:H	1.74	0.52
2:E:124:ASN:OD1	2:E:128:THR:HB	2.10	0.52
3:L:114:ASP:HB3	3:L:204:THR:HG22	1.90	0.52
4:H:98:ARG:O	4:H:106:GLU:CD	2.52	0.52
4:H:174:VAL:HG22	4:H:181:THR:O	2.09	0.52
3:M:47:PRO:HB3	4:N:95:TYR:CE1	2.44	0.52
4:N:38:LYS:NZ	4:N:90:ASP:HA	2.25	0.52
2:E:152:VAL:O	2:E:153:ARG:C	2.51	0.52
3:L:3:VAL:CB	3:L:26:SER:HB3	2.38	0.52
3:L:80:ASN:HD22	3:L:81:PRO:N	2.08	0.52
4:N:4:LEU:CD2	6:N:227:HOH:O	2.57	0.52
1:A:32:VAL:HG13	1:A:71:VAL:HG22	1.90	0.52
2:E:24:TRP:CZ3	2:E:139:ARG:HG2	2.44	0.52
4:H:129:LEU:HB2	4:H:144:GLY:CA	2.40	0.52
3:M:53:TYR:CE2	3:M:57:ASN:HB3	2.45	0.52
3:M:215:ARG:HG2	6:M:220:HOH:O	2.09	0.52
1:D:84:ILE:CD1	2:F:63:LEU:HD21	2.27	0.52
3:M:7:SER:CB	3:M:22:SER:HB2	2.40	0.52
4:N:33:TRP:HB2	4:N:99:SER:HB3	1.91	0.52
4:N:41:PRO:O	4:N:43:GLN:N	2.36	0.52
4:N:101:PHE:CA	6:N:237:HOH:O	2.51	0.52
4:N:101:PHE:CB	6:N:237:HOH:O	2.47	0.52
2:E:65:ASN:C	2:E:67:TRP:N	2.68	0.52
3:L:81:PRO:O	3:L:82:VAL:C	2.53	0.52
4:H:92:ALA:O	4:H:114:LEU:HB3	2.08	0.52
4:N:155:VAL:HG12	4:N:204:HIS:HB2	1.91	0.52
4:N:189:PRO:HB2	4:N:192:PRO:CD	2.39	0.52
1:A:121:VAL:HG23	1:C:23:SER:CA	2.38	0.52
1:B:116:TYR:HD1	1:B:117:SER:N	2.07	0.52
1:C:17:LEU:HB2	1:C:110:LEU:CD1	2.39	0.52
2:E:16:ASP:O	2:E:17:LYS:C	2.53	0.52
3:M:6:GLN:HG3	3:M:104:GLY:C	2.35	0.52
2:E:45:PHE:O	2:E:46:SER:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:164:GLN:HE21	3:M:34:ASN:CG	2.17	0.52
3:L:27:GLU:O	3:L:73:THR:HG22	2.09	0.52
3:L:74:ASP:HB3	6:L:241:HOH:O	2.10	0.52
4:H:124:PRO:HA	4:H:150:TYR:HB3	1.92	0.52
4:H:155:VAL:O	4:H:157:VAL:HG23	2.10	0.52
4:H:156:THR:OG1	4:H:203:ALA:HB3	2.10	0.52
3:M:117:PRO:CB	3:M:143:PHE:HB3	2.34	0.52
4:N:87:THR:O	4:N:116:VAL:HG11	2.10	0.52
4:N:100:GLY:HA3	4:N:103:TYR:CE1	2.44	0.52
1:A:40:THR:CG2	1:A:41:TRP:H	2.23	0.51
1:A:93:VAL:HG11	1:A:107:ILE:CD1	2.39	0.51
1:C:60:THR:C	1:C:62:GLU:H	2.19	0.51
1:C:79:TRP:HE3	1:C:84:ILE:HD13	1.75	0.51
2:E:63:LEU:C	2:E:63:LEU:CD2	2.82	0.51
3:L:29:VAL:O	3:L:29:VAL:HG12	2.10	0.51
3:L:109:GLU:HB3	6:L:261:HOH:O	2.10	0.51
3:L:117:PRO:HB3	3:L:143:PHE:CB	2.39	0.51
3:L:192:ARG:HD3	3:L:193:HIS:CE1	2.45	0.51
4:H:23:LYS:HD2	4:H:78:THR:OG1	2.11	0.51
4:N:175:LEU:HA	4:N:180:TYR:HD1	1.74	0.51
1:C:83:GLY:N	6:C:151:HOH:O	2.42	0.51
2:E:2:ARG:NH2	2:E:5:ARG:NH1	2.58	0.51
2:F:107:VAL:HB	2:F:116:VAL:HG12	1.92	0.51
3:L:171:ASP:CG	3:L:172:SER:H	2.18	0.51
4:N:205:PRO:O	4:N:207:SER:N	2.43	0.51
1:A:100:SER:HB2	2:E:91:TRP:CG	2.45	0.51
1:B:79:TRP:CD1	1:B:86:PRO:HB3	2.45	0.51
4:N:106:GLU:CD	4:N:106:GLU:N	2.69	0.51
4:N:153:GLU:OE2	4:N:173:ALA:HB2	2.10	0.51
1:B:85:SER:OG	2:E:98:GLN:HA	2.11	0.51
1:D:63:GLU:HG3	6:D:153:HOH:O	2.09	0.51
3:M:130:THR:HG22	3:M:130:THR:O	2.11	0.51
4:N:20:MET:HB2	6:N:260:HOH:O	2.11	0.51
1:D:59:THR:HG21	1:D:64:PHE:HB2	1.92	0.51
2:E:128:THR:HG22	2:E:129:CYS:N	2.26	0.51
3:L:110:ILE:HD12	3:L:111:LYS:H	1.75	0.51
3:M:2:ILE:HG12	3:M:27:GLU:HB2	1.93	0.51
3:M:114:ASP:HB3	3:M:204:THR:HG22	1.90	0.51
1:A:60:THR:C	1:A:62:GLU:N	2.67	0.51
1:C:32:VAL:HG13	1:C:71:VAL:HG22	1.93	0.51
1:D:79:TRP:CD1	1:D:86:PRO:HB3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:128:GLN:O	3:L:128:GLN:HG2	2.11	0.51
1:A:55:LEU:HD13	1:A:55:LEU:C	2.35	0.51
1:A:113:PRO:HG2	1:D:20:VAL:O	2.11	0.51
1:B:68:ILE:CD1	1:B:96:THR:HG23	2.39	0.51
1:C:40:THR:CG2	1:C:41:TRP:H	2.23	0.51
1:C:75:THR:HG23	1:C:91:ALA:H	1.76	0.51
1:D:69:TYR:HE1	6:D:144:HOH:O	1.93	0.51
2:E:10:ARG:HD2	2:E:10:ARG:O	2.11	0.51
3:L:46:GLN:HB3	3:L:47:PRO:HD2	1.92	0.51
3:L:123:PRO:HB3	3:L:213:PHE:CE2	2.46	0.51
3:L:134:ALA:O	3:L:184:THR:HA	2.11	0.51
4:H:68:ALA:HA	4:H:82:GLU:O	2.11	0.51
4:H:101:PHE:O	4:H:101:PHE:CD1	2.64	0.51
3:M:51:LEU:HA	3:M:62:ILE:HG13	1.93	0.51
3:M:191:GLU:HB3	3:M:215:ARG:HH21	1.76	0.51
4:N:91:SER:CB	4:N:116:VAL:HG23	2.40	0.51
1:B:30:VAL:CG2	1:B:55:LEU:HD12	2.41	0.51
2:E:23:THR:CG2	2:E:24:TRP:N	2.74	0.51
2:F:25:TYR:CD1	2:F:141:PRO:HB3	2.45	0.51
3:L:38:HIS:CD2	4:H:105:ASN:HD21	2.29	0.51
3:L:152:TRP:HZ2	6:L:236:HOH:O	1.93	0.51
4:H:38:LYS:NZ	4:H:90:ASP:HA	2.24	0.51
4:H:104:GLY:C	4:H:105:ASN:CG	2.79	0.51
1:A:60:THR:C	1:A:62:GLU:H	2.19	0.51
1:B:12:LEU:HD12	1:B:13:MET:H	1.75	0.51
1:D:82:LEU:N	1:D:82:LEU:HD23	2.25	0.51
2:F:152:VAL:O	2:F:153:ARG:C	2.53	0.51
3:L:55:ALA:O	3:L:56:SER:HB3	2.11	0.51
1:A:82:LEU:O	2:F:67:TRP:HZ3	1.94	0.51
3:L:3:VAL:O	3:L:25:ALA:HA	2.11	0.51
4:H:27:TYR:HD2	4:H:32:TYR:CD2	2.29	0.51
4:N:3:GLN:CA	4:N:3:GLN:HE21	2.24	0.51
2:F:32:PRO:HD2	2:F:36:PHE:CD1	2.45	0.50
2:F:80:THR:HG21	2:F:85:LYS:HB2	1.92	0.50
2:F:124:ASN:CG	2:F:128:THR:HB	2.36	0.50
3:L:7:SER:CB	3:L:8:PRO:HD3	2.40	0.50
2:E:27:MET:C	2:E:168:ILE:HD12	2.37	0.50
2:E:110:ASP:HB3	2:E:114:TYR:CE2	2.45	0.50
2:F:25:TYR:CD2	2:F:141:PRO:HD3	2.46	0.50
3:L:4:LEU:HD12	3:L:102:PHE:C	2.36	0.50
4:H:205:PRO:O	4:H:207:SER:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:120:SER:OG	3:M:139:PHE:HB2	2.11	0.50
1:D:20:VAL:HG12	1:D:21:ARG:N	2.25	0.50
2:F:116:VAL:HG22	2:F:136:VAL:HG13	1.93	0.50
3:L:53:TYR:CE2	3:L:57:ASN:HB3	2.47	0.50
4:N:3:GLN:HE21	4:N:3:GLN:HA	1.76	0.50
1:B:14:VAL:HA	1:B:107:ILE:O	2.11	0.50
1:C:79:TRP:O	1:C:80:LYS:C	2.55	0.50
3:L:199:GLU:HG2	3:L:210:VAL:HG22	1.94	0.50
4:H:110:GLN:H	4:H:110:GLN:HE21	1.59	0.50
3:M:135:SER:HB3	6:M:221:HOH:O	2.11	0.50
3:M:159:ARG:HG3	3:M:159:ARG:NH1	2.22	0.50
1:A:21:ARG:NH1	1:A:82:LEU:HD21	2.27	0.50
1:B:83:GLY:HA3	2:E:35:LEU:HD13	1.93	0.50
2:F:32:PRO:HD3	2:F:133:TYR:CB	2.41	0.50
4:H:98:ARG:O	4:H:106:GLU:OE1	2.29	0.50
4:N:55:ASP:C	4:N:57:HIS:N	2.66	0.50
4:N:100:GLY:C	4:N:102:ASP:H	2.19	0.50
1:C:108:ALA:HB3	1:C:119:THR:HG23	1.93	0.50
2:F:122:LEU:HD23	2:F:131:ASP:HB2	1.92	0.50
2:F:136:VAL:HG11	2:F:152:VAL:HG11	1.93	0.50
2:F:150:LYS:N	6:F:194:HOH:O	2.44	0.50
4:N:35:HIS:C	6:N:255:HOH:O	2.55	0.50
1:B:36:ALA:HB2	1:B:42:GLU:CG	2.42	0.50
1:B:83:GLY:CA	2:E:35:LEU:HD12	2.42	0.50
2:F:80:THR:O	2:F:82:ASP:N	2.43	0.50
3:M:7:SER:CB	3:M:8:PRO:HD3	2.41	0.50
3:M:64:ALA:O	3:M:65:ARG:C	2.53	0.50
1:C:95:PHE:CD1	1:C:95:PHE:N	2.80	0.50
2:E:133:TYR:HA	6:E:190:HOH:O	2.10	0.50
2:F:102:ASP:OD1	2:F:121:ARG:NH2	2.42	0.50
4:N:106:GLU:HG2	4:N:107:ASP:H	1.76	0.50
4:N:110:GLN:NE2	4:N:110:GLN:H	2.10	0.50
1:A:40:THR:CG2	1:A:41:TRP:N	2.73	0.50
1:C:60:THR:C	1:C:62:GLU:N	2.68	0.50
2:E:165:TYR:O	4:N:103:TYR:CE2	2.65	0.50
4:N:27:TYR:CD2	4:N:32:TYR:CD2	2.99	0.50
4:N:55:ASP:C	4:N:57:HIS:H	2.20	0.50
1:A:26:ILE:H	1:A:26:ILE:CD1	2.17	0.49
1:C:59:THR:OG1	1:C:63:GLU:HB3	2.11	0.49
3:L:119:VAL:HG12	3:L:120:SER:N	2.27	0.49
3:M:81:PRO:O	3:M:82:VAL:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:N:68:ALA:HA	4:N:82:GLU:O	2.13	0.49
4:N:134:ALA:HA	6:N:246:HOH:O	2.11	0.49
2:E:112:ASP:O	2:E:139:ARG:HG3	2.11	0.49
2:F:38:GLN:HB2	2:F:60:ARG:HH11	1.78	0.49
3:L:117:PRO:CB	3:L:143:PHE:HB3	2.41	0.49
4:H:98:ARG:HD3	4:H:106:GLU:HG3	1.94	0.49
4:N:36:TRP:O	4:N:48:ILE:HG13	2.11	0.49
4:N:193:ARG:CG	4:N:194:PRO:HA	2.42	0.49
2:F:16:ASP:N	2:F:111:TYR:OH	2.46	0.49
3:L:64:ALA:O	3:L:65:ARG:C	2.55	0.49
3:L:155:ASP:O	3:L:157:SER:N	2.45	0.49
3:L:194:ASN:HA	3:L:215:ARG:HB3	1.95	0.49
4:H:97:THR:CB	4:H:107:ASP:O	2.58	0.49
3:M:33:GLY:HA3	6:M:258:HOH:O	2.12	0.49
3:M:163:VAL:HG12	3:M:165:ASN:ND2	2.23	0.49
3:M:202:HIS:CE1	3:M:204:THR:HG23	2.47	0.49
4:N:129:LEU:HB2	4:N:144:GLY:CA	2.43	0.49
1:D:103:ARG:HD2	6:D:143:HOH:O	2.12	0.49
2:E:8:SER:O	2:E:9:PHE:C	2.55	0.49
2:E:65:ASN:O	2:E:66:ASN:OD1	2.30	0.49
3:L:109:GLU:HB2	6:L:221:HOH:O	2.13	0.49
4:N:4:LEU:HD21	4:N:22:CYS:SG	2.52	0.49
4:N:23:LYS:CE	6:N:252:HOH:O	2.61	0.49
4:H:132:GLY:O	4:H:133:SER:HB2	2.13	0.49
3:M:12:ALA:HA	3:M:109:GLU:O	2.12	0.49
4:N:36:TRP:HZ3	6:N:241:HOH:O	1.94	0.49
4:N:137:THR:C	4:N:139:SER:H	2.20	0.49
1:D:15:LYS:O	1:D:108:ALA:HA	2.13	0.49
2:F:8:SER:C	6:F:190:HOH:O	2.55	0.49
3:L:191:GLU:CB	3:L:215:ARG:NH2	2.73	0.49
3:L:202:HIS:CE1	3:L:204:THR:HG23	2.48	0.49
3:M:186:THR:HG1	3:M:189:GLU:H	1.57	0.49
3:M:192:ARG:HD3	3:M:193:HIS:CE1	2.48	0.49
4:N:155:VAL:O	4:N:157:VAL:HG23	2.12	0.49
4:N:157:VAL:HG13	4:N:202:VAL:HG22	1.94	0.49
1:A:85:SER:N	2:F:66:ASN:ND2	2.60	0.49
1:D:33:PHE:CB	1:D:41:TRP:HB3	2.43	0.49
2:F:17:LYS:HE3	6:F:183:HOH:O	2.13	0.49
3:M:128:GLN:N	6:M:241:HOH:O	2.24	0.49
2:F:20:PHE:HE1	2:F:45:PHE:CD2	2.30	0.49
2:F:22:GLY:HA3	2:F:139:ARG:HH22	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:LEU:C	1:A:12:LEU:HD23	2.38	0.49
1:C:26:ILE:O	1:C:27:ASN:HB2	2.11	0.49
1:D:60:THR:HG1	1:D:63:GLU:HG3	1.77	0.49
2:F:6:VAL:HA	2:F:9:PHE:CD1	2.48	0.49
3:L:2:ILE:HG23	3:L:27:GLU:H	1.77	0.49
4:H:47:TRP:CZ3	4:H:61:ASN:HB2	2.47	0.49
1:B:124:ASN:CB	1:B:125:PRO:CD	2.91	0.49
1:D:28:VAL:HB	1:D:49:THR:HG21	1.94	0.49
4:H:126:VAL:HA	4:H:146:LEU:O	2.12	0.49
4:N:64:PHE:O	4:N:65:LYS:C	2.56	0.49
4:N:84:SER:O	4:N:85:SER:C	2.55	0.49
1:B:35:LYS:CB	1:B:68:ILE:HB	2.43	0.48
1:C:40:THR:CG2	1:C:41:TRP:N	2.74	0.48
1:D:60:THR:C	6:D:153:HOH:O	2.55	0.48
2:E:25:TYR:CE2	2:E:141:PRO:HD3	2.48	0.48
2:F:165:TYR:O	4:H:103:TYR:CE2	2.65	0.48
4:H:64:PHE:O	4:H:65:LYS:C	2.56	0.48
3:M:174:ASP:OD1	3:M:176:THR:CG2	2.60	0.48
4:N:41:PRO:C	4:N:43:GLN:N	2.71	0.48
4:N:175:LEU:HA	4:N:180:TYR:CD1	2.48	0.48
1:A:59:THR:CG2	1:A:64:PHE:HB2	2.43	0.48
1:B:33:PHE:CB	1:B:41:TRP:HB3	2.44	0.48
1:D:78:TYR:O	1:D:81:ALA:HB3	2.12	0.48
3:L:155:ASP:C	3:L:157:SER:N	2.71	0.48
3:M:191:GLU:HA	3:M:215:ARG:NE	2.27	0.48
4:N:104:GLY:O	4:N:105:ASN:ND2	2.44	0.48
1:A:28:VAL:HB	1:A:49:THR:HG23	1.94	0.48
1:A:87:PHE:HB2	1:A:114:TYR:CE1	2.48	0.48
1:A:106:THR:HG22	6:A:135:HOH:O	2.12	0.48
1:C:55:LEU:HD12	1:C:58:LEU:HG	1.93	0.48
4:H:47:TRP:CE2	4:H:49:GLY:HA2	2.48	0.48
4:H:89:GLU:N	4:H:89:GLU:CD	2.71	0.48
4:N:193:ARG:HD2	4:N:198:VAL:HG21	1.96	0.48
1:C:12:LEU:HD23	1:C:12:LEU:C	2.38	0.48
1:D:7:GLU:HG3	1:D:8:SER:N	2.28	0.48
1:D:12:LEU:HD12	1:D:13:MET:N	2.28	0.48
1:D:65:VAL:HG23	1:D:66:GLU:N	2.27	0.48
1:D:104:ARG:HB3	1:D:123:THR:OG1	2.14	0.48
4:H:197:THR:CG2	4:H:214:LYS:HE2	2.43	0.48
3:M:3:VAL:H	3:M:26:SER:CB	2.27	0.48
1:B:111:LEU:HD23	1:B:111:LEU:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:14:VAL:HG12	1:D:15:LYS:N	2.29	0.48
2:F:124:ASN:HB2	2:F:128:THR:N	2.27	0.48
3:L:51:LEU:HD23	3:L:62:ILE:HD12	1.95	0.48
3:L:192:ARG:NH1	3:L:193:HIS:CE1	2.81	0.48
4:H:174:VAL:CG2	4:H:181:THR:O	2.62	0.48
4:H:175:LEU:HA	4:H:180:TYR:HD1	1.79	0.48
4:N:34:MET:N	6:N:228:HOH:O	2.46	0.48
4:N:98:ARG:O	4:N:106:GLU:CD	2.56	0.48
1:D:73:ILE:N	1:D:73:ILE:CD1	2.74	0.48
2:F:98:GLN:NE2	5:F:178:RTL:H202	2.29	0.48
3:M:192:ARG:HG2	3:M:192:ARG:NH1	2.28	0.48
1:C:102:PRO:O	1:C:103:ARG:HG3	2.14	0.48
2:E:102:ASP:CG	2:E:121:ARG:NH2	2.70	0.48
2:E:163:ARG:NH2	3:M:95:SER:OG	2.46	0.48
2:F:29:LYS:HA	2:F:134:SER:O	2.13	0.48
3:L:148:ILE:HG12	3:L:149:ASN:H	1.77	0.48
3:M:51:LEU:HD23	3:M:62:ILE:CD1	2.43	0.48
3:M:155:ASP:O	3:M:157:SER:N	2.47	0.48
4:N:129:LEU:HB2	4:N:144:GLY:HA3	1.96	0.48
1:A:84:ILE:HD12	1:A:84:ILE:H	1.79	0.48
1:C:33:PHE:HD2	1:C:43:PRO:HA	1.79	0.48
2:E:122:LEU:CD2	2:E:131:ASP:HB2	2.42	0.48
2:E:124:ASN:O	2:E:125:LEU:C	2.56	0.48
3:M:119:VAL:HG12	3:M:120:SER:N	2.28	0.48
3:M:122:PHE:O	3:M:136:VAL:HG13	2.14	0.48
4:N:6:GLU:HG2	6:N:227:HOH:O	2.13	0.48
1:A:12:LEU:HD23	1:A:13:MET:N	2.28	0.48
1:A:29:ALA:O	1:A:74:ASP:HB3	2.14	0.48
1:A:55:LEU:HD12	1:A:58:LEU:HG	1.96	0.48
2:E:126:ASP:CG	2:E:127:GLY:H	2.21	0.48
2:E:167:LEU:HD23	2:E:168:ILE:H	1.79	0.48
3:L:122:PHE:HA	3:L:123:PRO:HD3	1.56	0.48
3:M:27:GLU:O	3:M:73:THR:HG22	2.13	0.48
3:M:83:GLU:HB3	3:M:86:ASP:OD2	2.14	0.48
1:D:71:VAL:O	1:D:92:GLU:CA	2.57	0.48
2:E:155:ARG:O	2:E:159:LEU:HG	2.14	0.48
3:L:192:ARG:HH11	3:L:193:HIS:CE1	2.32	0.48
1:A:26:ILE:HD12	1:A:26:ILE:N	2.27	0.47
1:B:14:VAL:HG12	1:B:15:LYS:N	2.29	0.47
2:E:72:ASP:O	2:E:93:VAL:HG23	2.14	0.47
2:F:166:ARG:HD2	6:F:181:HOH:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:66:PHE:CD1	3:L:66:PHE:N	2.81	0.47
3:L:140:LEU:HD23	3:L:148:ILE:CD1	2.43	0.47
4:H:193:ARG:HG3	6:H:232:HOH:O	2.13	0.47
3:M:7:SER:HB3	3:M:22:SER:HB2	1.96	0.47
1:B:69:TYR:O	1:B:94:VAL:HA	2.14	0.47
2:E:22:GLY:HA3	2:E:139:ARG:HH22	1.79	0.47
2:E:53:MET:CG	6:E:193:HOH:O	2.48	0.47
2:F:163:ARG:HA	4:H:102:ASP:O	2.15	0.47
3:M:38:HIS:O	3:M:92:CYS:HA	2.13	0.47
1:B:116:TYR:CD1	1:B:117:SER:N	2.82	0.47
1:D:14:VAL:HA	1:D:107:ILE:O	2.14	0.47
1:D:88:HIS:CD2	6:D:129:HOH:O	2.67	0.47
4:H:149:GLY:HA2	4:H:179:LEU:HB3	1.97	0.47
4:H:193:ARG:HG3	4:H:194:PRO:HA	1.96	0.47
3:M:155:ASP:C	3:M:157:SER:N	2.73	0.47
1:A:22:GLY:HA3	1:D:114:TYR:CG	2.49	0.47
2:E:166:ARG:HH11	3:M:57:ASN:ND2	2.11	0.47
2:E:171:ASN:OD1	2:E:173:TYR:N	2.47	0.47
2:F:63:LEU:O	2:F:64:LEU:HB3	2.14	0.47
2:F:64:LEU:C	2:F:64:LEU:HD23	2.38	0.47
2:F:144:LEU:HG	2:F:148:ALA:HB3	1.97	0.47
3:L:110:ILE:CG2	3:L:175:SER:HB3	2.44	0.47
3:L:136:VAL:O	3:L:182:THR:HG23	2.15	0.47
3:M:180:SER:HB3	6:M:262:HOH:O	2.15	0.47
4:N:62:GLN:HE21	4:N:62:GLN:HB2	1.56	0.47
4:N:149:GLY:HA2	4:N:180:TYR:O	2.14	0.47
1:A:60:THR:OG1	1:A:61:GLU:N	2.46	0.47
1:C:84:ILE:HG22	1:C:85:SER:N	2.30	0.47
1:D:52:SER:HB2	1:D:54:GLU:HG2	1.96	0.47
2:E:94:ALA:HB3	2:E:97:LEU:HD12	1.96	0.47
2:F:63:LEU:C	2:F:63:LEU:CD2	2.85	0.47
3:L:83:GLU:HB3	3:L:86:ASP:OD2	2.14	0.47
4:H:96:CYS:N	6:H:233:HOH:O	2.47	0.47
4:N:124:PRO:HA	4:N:150:TYR:HB3	1.96	0.47
4:N:189:PRO:HB2	4:N:191:SER:OG	2.14	0.47
1:A:28:VAL:HB	1:A:49:THR:CG2	2.44	0.47
2:E:6:VAL:CG2	2:E:129:CYS:HB2	2.45	0.47
2:F:155:ARG:HB2	6:F:184:HOH:O	2.13	0.47
4:H:91:SER:HB2	4:H:116:VAL:HG23	1.97	0.47
4:H:165:SER:O	4:H:168:VAL:HG23	2.14	0.47
3:M:109:GLU:HB3	6:M:244:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:110:ILE:HG23	3:M:170:GLN:OE1	2.13	0.47
4:N:73:VAL:HG23	4:N:80:TYR:HE2	1.79	0.47
1:C:44:PHE:O	1:C:45:ALA:HB2	2.15	0.47
1:C:65:VAL:HB	6:C:147:HOH:O	2.13	0.47
2:E:105:TRP:O	2:E:107:VAL:N	2.47	0.47
2:F:67:TRP:HE3	2:F:67:TRP:HA	1.80	0.47
3:L:159:ARG:HG3	3:L:159:ARG:NH1	2.28	0.47
4:H:20:MET:HE1	4:H:94:TYR:CD1	2.50	0.47
4:H:22:CYS:H	4:H:78:THR:CG2	2.27	0.47
3:M:66:PHE:CD1	3:M:66:PHE:N	2.83	0.47
1:A:85:SER:H	2:F:66:ASN:ND2	2.11	0.47
1:C:98:ASN:ND2	1:C:103:ARG:N	2.63	0.47
1:D:12:LEU:O	1:D:58:LEU:HB2	2.14	0.47
2:E:155:ARG:O	2:E:158:GLU:HB2	2.15	0.47
2:E:172:GLY:O	2:E:173:TYR:C	2.58	0.47
2:F:26:ALA:HB1	2:F:168:ILE:CD1	2.45	0.47
3:L:12:ALA:HA	3:L:109:GLU:O	2.14	0.47
3:L:72:ARG:HB3	3:L:73:THR:H	1.56	0.47
3:L:109:GLU:HG3	3:L:110:ILE:N	2.30	0.47
3:M:110:ILE:HD12	3:M:111:LYS:N	2.28	0.47
1:A:79:TRP:CZ2	1:A:112:SER:HA	2.50	0.47
1:A:121:VAL:O	1:A:121:VAL:HG13	2.15	0.47
1:B:79:TRP:HZ2	1:B:112:SER:HA	1.80	0.47
2:E:23:THR:HG22	2:E:24:TRP:N	2.30	0.47
2:E:65:ASN:O	2:E:66:ASN:CG	2.58	0.47
2:E:128:THR:HG22	2:E:129:CYS:H	1.80	0.47
2:E:152:VAL:C	2:E:156:GLN:HE21	2.22	0.47
3:L:110:ILE:HG23	3:L:170:GLN:OE1	2.15	0.47
4:H:95:TYR:C	6:H:233:HOH:O	2.58	0.47
4:H:106:GLU:CB	6:H:216:HOH:O	2.62	0.47
3:M:44:PRO:HB3	6:M:266:HOH:O	2.14	0.47
4:N:130:ALA:HB1	6:N:229:HOH:O	2.15	0.47
4:N:149:GLY:HA2	4:N:179:LEU:HB3	1.96	0.47
1:A:44:PHE:O	1:A:45:ALA:HB2	2.15	0.47
1:A:50:SER:O	1:A:51:GLU:C	2.57	0.47
1:A:98:ASN:HD21	1:A:103:ARG:H	1.62	0.47
1:A:104:ARG:O	1:A:122:VAL:HG23	2.15	0.47
1:D:60:THR:OG1	1:D:63:GLU:HG3	2.14	0.47
4:H:87:THR:O	4:H:116:VAL:HG11	2.15	0.47
3:M:148:ILE:HG12	3:M:149:ASN:H	1.80	0.47
4:N:13:ARG:HE	4:N:13:ARG:HA	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:87:PHE:CE2	1:B:120:ALA:CB	2.98	0.46
1:B:15:LYS:O	1:B:108:ALA:HA	2.15	0.46
1:D:34:ARG:HE	1:D:65:VAL:HG21	1.80	0.46
2:E:75:GLY:HA2	2:E:90:TYR:HA	1.97	0.46
2:E:82:ASP:OD2	2:E:83:PRO:HD2	2.15	0.46
2:F:3:ASP:O	2:F:4:CYS:HB2	2.15	0.46
2:F:97:LEU:O	2:F:98:GLN:C	2.57	0.46
4:H:13:ARG:HE	4:H:13:ARG:HA	1.80	0.46
4:H:52:TYR:O	4:H:56:SER:N	2.49	0.46
4:H:205:PRO:O	4:H:206:ALA:C	2.57	0.46
3:M:128:GLN:O	3:M:128:GLN:HG2	2.15	0.46
3:M:151:LYS:HG2	3:M:158:GLU:HG3	1.96	0.46
4:N:155:VAL:HG12	4:N:204:HIS:CB	2.44	0.46
1:B:19:ALA:HB2	1:B:110:LEU:HG	1.97	0.46
1:B:98:ASN:H	1:B:98:ASN:HD22	1.63	0.46
2:E:162:ALA:O	2:E:163:ARG:HB2	2.15	0.46
3:L:137:VAL:HG22	3:L:182:THR:OG1	2.16	0.46
3:L:171:ASP:CG	3:L:172:SER:N	2.73	0.46
3:L:187:LYS:O	3:L:190:TYR:HB3	2.15	0.46
4:H:137:THR:C	4:H:139:SER:H	2.23	0.46
3:M:39:TRP:CD2	3:M:77:LEU:HB2	2.51	0.46
3:M:195:SER:CA	3:M:214:ASN:HD22	2.10	0.46
1:D:116:TYR:CD1	1:D:116:TYR:C	2.93	0.46
2:E:16:ASP:OD1	2:E:19:ARG:HG3	2.15	0.46
2:E:77:PHE:CE2	2:E:104:HIS:CD2	3.03	0.46
2:F:65:ASN:C	2:F:67:TRP:N	2.70	0.46
4:H:36:TRP:O	4:H:48:ILE:HG13	2.15	0.46
1:A:85:SER:H	2:F:66:ASN:HD21	1.61	0.46
1:B:7:GLU:HB2	6:B:137:HOH:O	2.16	0.46
2:E:32:PRO:HD2	2:E:36:PHE:CD1	2.51	0.46
2:F:82:ASP:OD2	2:F:83:PRO:HD2	2.15	0.46
3:M:127:GLU:HB3	4:N:127:TYR:HE1	1.81	0.46
4:N:1:ASP:O	4:N:3:GLN:N	2.49	0.46
4:N:89:GLU:C	4:N:91:SER:N	2.72	0.46
4:N:94:TYR:HE1	4:N:114:LEU:HD23	1.80	0.46
1:B:86:PRO:HB2	6:B:132:HOH:O	2.14	0.46
2:F:144:LEU:HG	2:F:145:PRO:HD2	1.96	0.46
4:H:33:TRP:O	4:H:34:MET:CB	2.61	0.46
4:H:74:THR:O	4:H:77:SER:N	2.46	0.46
4:N:94:TYR:HD1	6:N:258:HOH:O	1.98	0.46
1:B:59:THR:HG23	1:B:64:PHE:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:63:GLU:O	1:B:65:VAL:N	2.49	0.46
2:F:64:LEU:O	2:F:65:ASN:HB2	2.16	0.46
2:F:109:THR:CA	2:F:114:TYR:CE1	2.99	0.46
3:L:143:PHE:CD1	3:L:143:PHE:C	2.94	0.46
3:M:3:VAL:O	3:M:25:ALA:HA	2.15	0.46
3:M:154:ILE:O	3:M:154:ILE:HG23	2.16	0.46
3:M:190:TYR:CE2	3:M:215:ARG:HD2	2.51	0.46
4:N:112:THR:O	6:N:258:HOH:O	2.21	0.46
4:N:132:GLY:O	4:N:133:SER:CB	2.64	0.46
1:A:20:VAL:HG23	1:A:79:TRP:CH2	2.50	0.46
1:D:11:PRO:HD2	1:D:59:THR:O	2.16	0.46
2:E:2:ARG:O	2:E:3:ASP:CB	2.64	0.46
2:F:65:ASN:O	2:F:66:ASN:OD1	2.34	0.46
4:H:91:SER:CB	4:H:116:VAL:HG23	2.46	0.46
4:H:135:ALA:C	4:H:136:GLN:OE1	2.59	0.46
4:H:171:PHE:O	4:H:182:LEU:HG	2.14	0.46
3:M:38:HIS:CD2	4:N:105:ASN:HD21	2.34	0.46
3:M:121:ILE:HD11	3:M:152:TRP:CZ3	2.51	0.46
3:M:164:LEU:HD21	4:N:174:VAL:CB	2.46	0.46
4:N:98:ARG:O	4:N:106:GLU:OE1	2.34	0.46
2:E:97:LEU:O	2:E:98:GLN:C	2.59	0.46
2:E:153:ARG:O	2:E:154:GLN:C	2.58	0.46
2:E:166:ARG:NE	6:M:219:HOH:O	2.48	0.46
4:H:116:VAL:HG12	4:H:116:VAL:O	2.16	0.46
4:H:205:PRO:HD2	6:H:250:HOH:O	2.15	0.46
4:N:47:TRP:CZ3	4:N:61:ASN:HB2	2.50	0.46
1:B:83:GLY:CA	2:E:35:LEU:CD1	2.94	0.46
2:E:102:ASP:OD1	2:E:121:ARG:NH2	2.49	0.46
3:L:7:SER:CB	3:L:22:SER:HB2	2.46	0.46
3:L:70:GLY:O	3:L:71:SER:HB3	2.16	0.46
3:L:214:ASN:HB2	6:L:262:HOH:O	2.14	0.46
4:H:41:PRO:C	4:H:43:GLN:N	2.74	0.46
4:N:205:PRO:O	4:N:206:ALA:C	2.59	0.46
1:A:18:ASP:OD1	1:A:78:TYR:CE2	2.69	0.45
4:N:18:VAL:O	4:N:83:LEU:N	2.48	0.45
1:A:18:ASP:C	1:A:18:ASP:OD2	2.58	0.45
1:B:28:VAL:HB	1:B:49:THR:CG2	2.46	0.45
1:C:50:SER:O	1:C:51:GLU:C	2.59	0.45
1:C:84:ILE:HD12	6:C:151:HOH:O	2.16	0.45
2:F:154:GLN:O	2:F:158:GLU:HG3	2.17	0.45
3:L:18:ARG:HB2	3:L:80:ASN:CG	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:N:101:PHE:CG	4:N:101:PHE:O	2.68	0.45
1:A:16:VAL:CG1	1:A:109:ALA:HB3	2.31	0.45
1:B:36:ALA:HB2	1:B:42:GLU:CD	2.42	0.45
1:C:69:TYR:CE1	1:C:97:ALA:HB3	2.51	0.45
2:E:104:HIS:CE1	2:E:117:GLN:HE21	2.34	0.45
2:F:60:ARG:HG2	2:F:61:VAL:N	2.30	0.45
3:L:18:ARG:HB2	3:L:80:ASN:CB	2.44	0.45
3:M:72:ARG:HB3	3:M:73:THR:H	1.54	0.45
3:M:187:LYS:HE2	3:M:191:GLU:OE1	2.17	0.45
1:A:69:TYR:CE1	1:A:97:ALA:HB3	2.51	0.45
2:E:16:ASP:N	2:E:111:TYR:OH	2.49	0.45
3:L:169:ASP:O	3:L:170:GLN:C	2.60	0.45
1:C:27:ASN:N	1:C:49:THR:OG1	2.49	0.45
1:D:98:ASN:H	1:D:98:ASN:HD22	1.65	0.45
2:E:72:ASP:HB3	2:E:93:VAL:HG23	1.98	0.45
2:E:163:ARG:HD3	3:M:36:PHE:CE2	2.51	0.45
2:F:67:TRP:HA	2:F:67:TRP:CE3	2.51	0.45
3:L:154:ILE:O	3:L:155:ASP:HB2	2.16	0.45
3:M:12:ALA:CB	3:M:109:GLU:HG2	2.46	0.45
3:M:93:GLN:NE2	3:M:94:GLN:C	2.74	0.45
3:M:129:LEU:HB3	3:M:187:LYS:HG3	1.99	0.45
3:M:179:MET:HG2	3:M:180:SER:N	2.31	0.45
1:A:80:LYS:NZ	6:A:137:HOH:O	2.28	0.45
1:B:33:PHE:HB3	1:B:41:TRP:HB3	1.98	0.45
2:F:117:GLN:OE1	2:F:134:SER:HA	2.17	0.45
3:L:144:TYR:CG	3:L:145:PRO:HA	2.52	0.45
4:H:23:LYS:HG2	4:H:78:THR:OG1	2.16	0.45
4:H:129:LEU:HB2	4:H:144:GLY:HA3	1.96	0.45
4:N:131:PRO:HD3	6:N:257:HOH:O	2.16	0.45
2:F:118:TYR:CD1	2:F:118:TYR:C	2.95	0.45
2:F:124:ASN:HB2	2:F:128:THR:C	2.41	0.45
3:L:29:VAL:HG13	3:L:94:GLN:HB2	1.99	0.45
4:H:3:GLN:HE21	4:H:3:GLN:CA	2.29	0.45
4:N:20:MET:CB	6:N:241:HOH:O	2.60	0.45
1:B:98:ASN:N	1:B:98:ASN:ND2	2.62	0.45
1:C:122:VAL:HG22	1:C:123:THR:N	2.31	0.45
4:N:93:VAL:HG22	4:N:113:THR:HG22	1.99	0.45
1:B:98:ASN:HD22	1:B:98:ASN:N	2.15	0.45
1:B:104:ARG:HB3	1:B:123:THR:OG1	2.16	0.45
1:D:11:PRO:HB2	1:D:64:PHE:CD2	2.51	0.45
4:N:145:CYS:C	6:N:235:HOH:O	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:55:LEU:CD1	1:A:58:LEU:HG	2.46	0.45
1:C:79:TRP:CH2	1:C:113:PRO:HD3	2.52	0.45
1:D:59:THR:HG23	1:D:64:PHE:HB2	1.99	0.45
2:E:67:TRP:HA	2:E:67:TRP:HE3	1.82	0.45
2:E:163:ARG:NH2	3:M:95:SER:HB2	2.32	0.45
2:F:163:ARG:O	2:F:165:TYR:N	2.49	0.45
3:L:13:VAL:HA	3:L:111:LYS:HE3	1.99	0.45
3:L:151:LYS:HG2	3:L:158:GLU:HG3	1.98	0.45
4:N:21:SER:O	4:N:22:CYS:HB2	2.17	0.45
2:E:121:ARG:CB	2:E:122:LEU:HD22	2.42	0.44
2:E:133:TYR:CE1	2:E:135:PHE:HE2	2.35	0.44
2:F:12:LYS:HA	2:F:12:LYS:HD2	1.76	0.44
2:F:146:PRO:O	2:F:147:GLU:C	2.60	0.44
4:H:97:THR:HA	4:H:107:ASP:O	2.18	0.44
3:M:18:ARG:HB2	3:M:80:ASN:CG	2.42	0.44
4:N:52:TYR:O	4:N:56:SER:N	2.49	0.44
4:N:61:ASN:HD21	4:N:63:LYS:HB3	1.81	0.44
4:N:97:THR:CB	4:N:107:ASP:O	2.65	0.44
1:C:18:ASP:OD2	1:C:18:ASP:C	2.59	0.44
2:E:62:ARG:HD3	2:E:68:ASP:OD2	2.17	0.44
2:E:107:VAL:HB	2:E:116:VAL:HG12	1.99	0.44
2:F:3:ASP:HA	6:F:196:HOH:O	2.17	0.44
2:F:6:VAL:CG2	2:F:129:CYS:HB2	2.47	0.44
2:F:64:LEU:O	2:F:65:ASN:CB	2.65	0.44
2:F:128:THR:HG22	2:F:129:CYS:N	2.31	0.44
3:L:120:SER:OG	3:L:139:PHE:HB2	2.17	0.44
4:N:22:CYS:N	4:N:78:THR:HG23	2.31	0.44
1:D:97:ALA:O	1:D:99:ASP:N	2.50	0.44
2:E:124:ASN:HB2	2:E:128:THR:N	2.32	0.44
6:F:179:HOH:O	3:L:36:PHE:HE2	2.00	0.44
3:L:140:LEU:HD12	3:L:140:LEU:N	2.32	0.44
4:H:52:TYR:OH	6:H:222:HOH:O	2.20	0.44
4:H:100:GLY:C	4:H:102:ASP:H	2.26	0.44
4:H:193:ARG:CG	4:H:194:PRO:HA	2.47	0.44
3:M:130:THR:HB	6:M:269:HOH:O	2.17	0.44
3:M:144:TYR:O	3:M:202:HIS:CE1	2.68	0.44
3:M:184:THR:N	6:M:221:HOH:O	2.50	0.44
4:N:61:ASN:O	4:N:63:LYS:N	2.50	0.44
4:N:174:VAL:O	4:N:180:TYR:HA	2.17	0.44
1:A:11:PRO:O	1:A:105:TYR:N	2.40	0.44
1:A:27:ASN:N	1:A:49:THR:OG1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:84:ILE:HG22	1:A:85:SER:N	2.32	0.44
1:A:98:ASN:ND2	1:A:103:ARG:H	2.15	0.44
1:B:11:PRO:HG3	1:B:60:THR:C	2.42	0.44
1:C:94:VAL:HG23	1:C:94:VAL:O	2.16	0.44
2:E:90:TYR:O	2:E:91:TRP:HB3	2.17	0.44
2:E:116:VAL:CG2	2:E:136:VAL:HG13	2.46	0.44
2:E:123:LEU:HB2	6:E:199:HOH:O	2.17	0.44
3:L:139:PHE:CE2	4:H:185:SER:HB3	2.52	0.44
3:L:179:MET:HG2	3:L:180:SER:N	2.30	0.44
3:M:188:ASP:C	3:M:190:TYR:N	2.76	0.44
3:M:191:GLU:CB	3:M:215:ARG:NH2	2.81	0.44
1:C:104:ARG:O	1:C:122:VAL:HG23	2.17	0.44
1:D:83:GLY:HA3	2:F:35:LEU:CD1	2.41	0.44
1:D:124:ASN:HB3	1:D:125:PRO:CD	2.39	0.44
2:F:24:TRP:CZ3	2:F:139:ARG:HG2	2.52	0.44
3:L:191:GLU:HA	3:L:215:ARG:NH2	2.29	0.44
4:H:135:ALA:HA	4:H:136:GLN:OE1	2.17	0.44
4:H:198:VAL:HG12	4:H:215:ILE:HG13	1.98	0.44
4:H:205:PRO:CG	6:H:250:HOH:O	2.64	0.44
3:M:109:GLU:HG3	3:M:110:ILE:N	2.31	0.44
4:N:2:VAL:HG11	4:N:107:ASP:OD2	2.18	0.44
4:N:39:GLN:HB2	4:N:45:LEU:HD23	1.99	0.44
1:A:74:ASP:CG	1:A:77:SER:HB2	2.41	0.44
1:C:18:ASP:OD1	1:C:78:TYR:CE2	2.70	0.44
1:C:29:ALA:O	1:C:74:ASP:HB3	2.18	0.44
1:D:34:ARG:HG2	1:D:34:ARG:NH1	2.33	0.44
2:F:5:ARG:O	2:F:6:VAL:C	2.61	0.44
2:F:121:ARG:C	2:F:122:LEU:HD13	2.42	0.44
2:F:166:ARG:NH1	3:L:57:ASN:ND2	2.66	0.44
4:H:151:PHE:CG	4:H:152:PRO:HA	2.52	0.44
1:C:8:SER:HB2	1:C:9:LYS:H	1.69	0.44
1:D:69:TYR:O	1:D:94:VAL:HA	2.18	0.44
2:F:75:GLY:HA2	2:F:90:TYR:HA	2.00	0.44
2:F:102:ASP:CG	2:F:121:ARG:NH2	2.67	0.44
3:L:51:LEU:HA	3:L:62:ILE:HG13	2.00	0.44
4:H:121:THR:HG23	4:H:151:PHE:O	2.17	0.44
3:M:174:ASP:OD1	3:M:174:ASP:C	2.61	0.44
4:H:139:SER:O	4:H:190:SER:HB2	2.18	0.44
3:M:42:GLN:HE22	4:N:39:GLN:CD	2.24	0.44
3:M:70:GLY:O	3:M:71:SER:HB3	2.17	0.44
3:M:71:SER:O	3:M:72:ARG:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:127:GLU:HA	3:M:130:THR:HB	2.00	0.44
1:A:38:ASP:O	1:A:39:ASP:CB	2.66	0.43
2:E:5:ARG:HB2	2:E:8:SER:HB2	1.99	0.43
2:E:42:VAL:HG13	2:E:42:VAL:O	2.18	0.43
2:E:67:TRP:HA	2:E:67:TRP:CE3	2.53	0.43
3:L:154:ILE:O	3:L:154:ILE:HG23	2.18	0.43
3:L:192:ARG:C	3:L:193:HIS:ND1	2.76	0.43
4:H:198:VAL:HG23	6:H:232:HOH:O	2.16	0.43
2:F:36:PHE:O	2:F:37:LEU:C	2.60	0.43
2:F:40:ASN:HD21	2:F:172:GLY:H	1.65	0.43
3:M:7:SER:HA	6:M:226:HOH:O	2.18	0.43
3:M:119:VAL:HA	6:M:217:HOH:O	2.17	0.43
3:M:123:PRO:HG3	3:M:213:PHE:CE2	2.53	0.43
3:M:164:LEU:HD21	4:N:174:VAL:HG11	1.99	0.43
1:D:20:VAL:HG12	1:D:21:ARG:CG	2.28	0.43
4:H:103:TYR:HB2	4:H:104:GLY:H	1.69	0.43
4:N:23:LYS:HE2	4:N:23:LYS:HB3	1.85	0.43
4:N:181:THR:C	6:N:256:HOH:O	2.61	0.43
1:B:12:LEU:O	1:B:58:LEU:HB2	2.18	0.43
2:F:66:ASN:ND2	2:F:66:ASN:C	2.77	0.43
3:L:144:TYR:O	3:L:202:HIS:CE1	2.69	0.43
4:H:4:LEU:HD21	4:H:22:CYS:SG	2.58	0.43
4:N:10:VAL:HG11	4:N:18:VAL:HG11	1.99	0.43
4:N:37:ILE:HD13	4:N:47:TRP:HA	2.00	0.43
1:B:35:LYS:HB2	6:B:133:HOH:O	2.19	0.43
1:B:97:ALA:O	1:B:99:ASP:N	2.51	0.43
2:E:12:LYS:HB2	2:E:108:ASP:HA	2.00	0.43
2:F:90:TYR:CZ	2:F:100:GLY:HA3	2.53	0.43
3:L:138:CYS:CB	6:L:236:HOH:O	2.66	0.43
2:F:11:VAL:CG2	2:F:12:LYS:N	2.80	0.43
3:L:148:ILE:HG12	3:L:149:ASN:N	2.33	0.43
3:M:7:SER:HB2	3:M:22:SER:HB2	2.00	0.43
1:D:66:GLU:HG3	1:D:99:ASP:HA	2.00	0.43
2:E:29:LYS:O	2:E:165:TYR:HA	2.19	0.43
2:E:39:ASP:OD2	2:E:60:ARG:CZ	2.67	0.43
2:F:5:ARG:HB2	2:F:8:SER:HB2	2.01	0.43
3:L:186:THR:HG1	3:L:189:GLU:H	1.63	0.43
4:H:94:TYR:HE1	4:H:114:LEU:HD23	1.84	0.43
4:H:149:GLY:HA2	4:H:180:TYR:O	2.18	0.43
4:N:144:GLY:O	4:N:159:TRP:HH2	2.01	0.43
1:C:97:ALA:O	1:C:98:ASN:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:17:LEU:O	1:D:111:LEU:HG	2.19	0.43
1:D:98:ASN:HD22	1:D:98:ASN:N	2.16	0.43
2:E:16:ASP:OD2	2:E:16:ASP:C	2.59	0.43
2:E:126:ASP:CG	2:E:127:GLY:N	2.77	0.43
2:E:163:ARG:NH2	3:M:95:SER:CB	2.82	0.43
2:F:148:ALA:O	2:F:149:GLN:C	2.61	0.43
3:L:6:GLN:HG3	3:L:104:GLY:C	2.43	0.43
3:L:163:VAL:HG12	3:L:165:ASN:ND2	2.30	0.43
4:H:73:VAL:HG12	4:H:76:ALA:H	1.83	0.43
4:N:42:GLY:C	4:N:43:GLN:CD	2.86	0.43
1:B:7:GLU:HG3	1:B:8:SER:N	2.33	0.43
1:B:30:VAL:HG21	1:B:55:LEU:HD12	1.99	0.43
1:B:110:LEU:O	1:B:116:TYR:HA	2.19	0.43
1:C:84:ILE:HD12	1:C:84:ILE:H	1.82	0.43
1:D:111:LEU:HD23	1:D:111:LEU:N	2.34	0.43
2:E:5:ARG:O	2:E:6:VAL:C	2.62	0.43
3:L:191:GLU:HA	3:L:215:ARG:NE	2.30	0.43
1:D:9:LYS:HB3	1:D:104:ARG:HH22	1.84	0.43
2:E:160:CYS:O	2:E:161:LEU:HD23	2.19	0.43
3:L:129:LEU:O	3:L:131:SER:N	2.50	0.43
3:M:191:GLU:CA	3:M:215:ARG:NH2	2.81	0.43
4:N:9:THR:HG22	4:N:10:VAL:N	2.34	0.43
4:N:189:PRO:C	4:N:191:SER:H	2.27	0.43
1:C:63:GLU:O	1:C:65:VAL:HG13	2.19	0.42
2:E:2:ARG:HH21	2:E:5:ARG:NH1	2.17	0.42
2:F:88:MET:SD	5:F:178:RTL:H183	2.59	0.42
2:F:90:TYR:O	2:F:91:TRP:HB3	2.19	0.42
3:L:6:GLN:NE2	6:L:220:HOH:O	2.51	0.42
4:N:89:GLU:C	4:N:91:SER:H	2.27	0.42
4:N:129:LEU:O	6:N:257:HOH:O	2.22	0.42
1:B:11:PRO:HG2	1:B:12:LEU:H	1.85	0.42
1:C:67:GLY:CA	6:C:153:HOH:O	2.64	0.42
1:C:99:ASP:CG	1:C:100:SER:H	2.26	0.42
1:D:7:GLU:CG	1:D:8:SER:H	2.26	0.42
3:L:7:SER:HB3	3:L:22:SER:HB2	2.01	0.42
3:M:15:LEU:HD23	3:M:15:LEU:C	2.45	0.42
1:C:26:ILE:H	1:C:26:ILE:CD1	2.20	0.42
1:C:93:VAL:HA	6:C:132:HOH:O	2.19	0.42
1:D:103:ARG:HB2	1:D:105:TYR:CE2	2.54	0.42
2:F:116:VAL:CG2	2:F:136:VAL:HG13	2.49	0.42
3:L:34:ASN:HB3	3:L:35:SER:H	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:129:LEU:C	3:L:131:SER:N	2.75	0.42
3:L:174:ASP:OD1	3:L:174:ASP:C	2.62	0.42
4:H:154:PRO:O	4:H:155:VAL:CG1	2.57	0.42
1:A:16:VAL:HA	1:A:109:ALA:O	2.18	0.42
2:E:80:THR:HG21	2:E:85:LYS:CB	2.48	0.42
2:F:2:ARG:O	2:F:3:ASP:CB	2.67	0.42
2:F:12:LYS:O	2:F:84:ALA:HB2	2.19	0.42
3:L:13:VAL:HG22	3:L:14:SER:N	2.34	0.42
3:L:31:SER:C	3:L:33:GLY:H	2.27	0.42
3:L:137:VAL:HG22	3:L:182:THR:CG2	2.49	0.42
4:H:18:VAL:O	4:H:83:LEU:N	2.52	0.42
4:H:41:PRO:O	4:H:43:GLN:N	2.45	0.42
4:H:176:GLN:N	4:H:179:LEU:O	2.52	0.42
4:H:205:PRO:HG2	6:H:250:HOH:O	2.18	0.42
1:C:30:VAL:HG12	1:C:31:HIS:N	2.34	0.42
1:D:73:ILE:O	1:D:75:THR:HG23	2.19	0.42
1:D:110:LEU:O	1:D:116:TYR:HA	2.19	0.42
2:E:124:ASN:HB2	2:E:128:THR:C	2.44	0.42
2:F:65:ASN:O	2:F:66:ASN:CG	2.62	0.42
2:F:167:LEU:HD23	2:F:168:ILE:N	2.35	0.42
3:L:138:CYS:HB3	6:L:236:HOH:O	2.20	0.42
4:N:57:HIS:CD2	4:N:58:THR:H	2.37	0.42
2:F:115:ALA:N	2:F:137:PHE:O	2.53	0.42
2:F:128:THR:HG22	2:F:129:CYS:H	1.85	0.42
3:L:154:ILE:CG2	6:L:240:HOH:O	2.67	0.42
4:H:61:ASN:O	4:H:63:LYS:N	2.52	0.42
4:H:101:PHE:CE2	4:H:102:ASP:OD2	2.72	0.42
3:M:159:ARG:HH12	3:M:161:ASN:HB2	1.82	0.42
3:M:182:THR:N	6:M:242:HOH:O	2.51	0.42
4:N:142:THR:HA	4:N:187:THR:HA	2.02	0.42
4:N:205:PRO:HG2	4:N:206:ALA:H	1.84	0.42
1:B:9:LYS:HZ2	1:B:9:LYS:CB	2.33	0.42
2:E:38:GLN:HE21	2:E:38:GLN:HB3	1.65	0.42
3:L:181:SER:HA	6:L:234:HOH:O	2.18	0.42
4:H:134:ALA:O	4:H:135:ALA:HB3	2.20	0.42
3:M:121:ILE:HD12	3:M:198:CYS:CB	2.49	0.42
1:A:21:ARG:CZ	1:A:82:LEU:HD21	2.50	0.42
1:C:55:LEU:C	1:C:55:LEU:CD1	2.92	0.42
2:E:12:LYS:HA	2:E:12:LYS:HD2	1.83	0.42
2:E:74:VAL:O	2:E:90:TYR:HB2	2.20	0.42
2:F:20:PHE:O	2:F:139:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:32:PRO:CB	2:F:133:TYR:HB3	2.43	0.42
3:L:18:ARG:HB2	3:L:80:ASN:OD1	2.19	0.42
3:M:71:SER:N	3:M:75:PHE:CE2	2.88	0.42
1:B:11:PRO:HD2	1:B:59:THR:O	2.20	0.42
2:E:64:LEU:HD23	2:E:64:LEU:C	2.45	0.42
2:E:129:CYS:SG	2:E:131:ASP:O	2.78	0.42
2:F:118:TYR:OH	2:F:129:CYS:CB	2.68	0.42
2:F:121:ARG:CB	2:F:122:LEU:HD22	2.44	0.42
3:L:187:LYS:HE2	3:L:191:GLU:OE1	2.20	0.42
3:M:121:ILE:HD12	3:M:198:CYS:HB2	2.01	0.42
3:M:144:TYR:CG	3:M:145:PRO:HA	2.55	0.42
1:B:17:LEU:HB2	1:B:110:LEU:HD12	2.02	0.42
1:B:31:HIS:ND1	1:B:46:SER:HB2	2.33	0.42
1:B:73:ILE:N	1:B:73:ILE:CD1	2.82	0.42
1:D:17:LEU:HD13	1:D:17:LEU:HA	1.82	0.42
4:H:189:PRO:C	4:H:191:SER:H	2.28	0.42
3:M:50:LEU:HD12	3:M:51:LEU:H	1.84	0.42
4:N:131:PRO:CD	6:N:229:HOH:O	2.50	0.42
1:C:28:VAL:O	1:C:48:LYS:HA	2.20	0.41
1:C:84:ILE:O	1:C:86:PRO:CD	2.68	0.41
2:F:172:GLY:O	2:F:173:TYR:C	2.62	0.41
3:L:23:CYS:HB2	6:L:220:HOH:O	2.19	0.41
3:L:155:ASP:HA	3:L:195:SER:OG	2.19	0.41
4:H:57:HIS:CD2	4:H:58:THR:H	2.38	0.41
3:M:18:ARG:HB2	3:M:80:ASN:CB	2.49	0.41
3:M:93:GLN:HG2	3:M:101:THR:O	2.19	0.41
3:M:100:TYR:N	3:M:100:TYR:CD1	2.88	0.41
3:M:122:PHE:HA	3:M:123:PRO:HD3	1.57	0.41
4:N:198:VAL:O	4:N:215:ILE:HG12	2.20	0.41
1:C:18:ASP:OD1	1:C:78:TYR:HE2	2.03	0.41
1:C:90:HIS:CD2	1:C:92:GLU:HG3	2.54	0.41
1:D:16:VAL:HG13	1:D:111:LEU:HD11	2.00	0.41
2:E:3:ASP:O	2:E:4:CYS:HB2	2.19	0.41
2:E:40:ASN:HD21	2:E:172:GLY:N	2.18	0.41
2:E:109:THR:HA	2:E:114:TYR:CD1	2.54	0.41
2:E:140:ASP:HA	2:E:141:PRO:HD2	1.89	0.41
2:F:108:ASP:CG	2:F:109:THR:N	2.78	0.41
4:H:1:ASP:O	4:H:3:GLN:N	2.53	0.41
4:H:89:GLU:C	4:H:91:SER:N	2.78	0.41
4:H:117:SER:OG	4:H:118:SER:N	2.51	0.41
3:M:31:SER:C	3:M:33:GLY:N	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:170:GLN:HG3	3:M:176:THR:O	2.20	0.41
4:N:175:LEU:HD11	4:N:178:ASP:HA	2.02	0.41
4:N:193:ARG:HB2	4:N:198:VAL:HG21	2.01	0.41
1:A:90:HIS:CD2	1:A:92:GLU:HG3	2.55	0.41
1:C:103:ARG:HB3	1:C:122:VAL:CG2	2.50	0.41
2:E:12:LYS:O	2:E:84:ALA:HB2	2.20	0.41
2:E:36:PHE:O	2:E:37:LEU:C	2.64	0.41
2:E:60:ARG:HG2	2:E:61:VAL:N	2.35	0.41
2:E:121:ARG:HB3	2:E:122:LEU:CD2	2.44	0.41
2:F:124:ASN:O	2:F:125:LEU:C	2.62	0.41
2:F:153:ARG:O	2:F:154:GLN:C	2.62	0.41
3:L:19:ALA:CB	3:L:79:ILE:HB	2.48	0.41
4:H:106:GLU:CD	4:H:106:GLU:N	2.79	0.41
3:M:148:ILE:HG12	3:M:149:ASN:N	2.35	0.41
2:E:133:TYR:CD1	2:E:133:TYR:C	2.98	0.41
5:E:177:RTL:H151	5:E:177:RTL:H201	1.80	0.41
2:F:38:GLN:CB	2:F:60:ARG:HH11	2.33	0.41
3:L:54:ARG:O	3:L:55:ALA:C	2.63	0.41
4:H:84:SER:O	4:H:85:SER:C	2.63	0.41
3:M:110:ILE:CG2	3:M:175:SER:HB3	2.50	0.41
4:N:138:ASN:C	4:N:190:SER:HB2	2.45	0.41
4:N:140:MET:HE3	4:N:189:PRO:HG3	2.01	0.41
4:N:151:PHE:CG	4:N:152:PRO:HA	2.56	0.41
1:B:114:TYR:CG	1:C:22:GLY:HA3	2.56	0.41
2:E:15:PHE:CG	2:E:16:ASP:N	2.88	0.41
2:F:63:LEU:HD23	2:F:64:LEU:CB	2.47	0.41
2:F:125:LEU:HD12	2:F:126:ASP:CB	2.51	0.41
2:F:133:TYR:CD1	2:F:133:TYR:C	2.99	0.41
3:L:31:SER:C	3:L:33:GLY:N	2.78	0.41
4:N:23:LYS:HG2	4:N:78:THR:OG1	2.21	0.41
4:N:204:HIS:CD2	4:N:206:ALA:HB3	2.55	0.41
1:A:82:LEU:CG	2:F:67:TRP:CH2	2.81	0.41
1:A:113:PRO:O	1:A:114:TYR:HD1	2.03	0.41
1:B:11:PRO:HB2	1:B:64:PHE:HD2	1.86	0.41
1:C:23:SER:HB2	1:C:24:PRO:CD	2.50	0.41
1:D:33:PHE:HB3	1:D:41:TRP:HB3	2.02	0.41
2:E:32:PRO:CB	2:E:133:TYR:HB3	2.46	0.41
2:E:148:ALA:O	2:E:149:GLN:C	2.64	0.41
3:L:124:PRO:HD3	3:L:136:VAL:HA	2.02	0.41
4:H:33:TRP:HB2	4:H:99:SER:HB3	2.03	0.41
4:H:136:GLN:OE1	4:H:136:GLN:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:51:LEU:HD23	3:M:62:ILE:HD12	2.01	0.41
3:M:72:ARG:HA	3:M:72:ARG:NE	2.36	0.41
3:M:127:GLU:HB3	4:N:127:TYR:CE1	2.55	0.41
4:N:33:TRP:O	4:N:34:MET:CB	2.66	0.41
1:A:68:ILE:N	1:A:68:ILE:CD1	2.82	0.41
1:C:60:THR:HG22	1:C:63:GLU:HB2	1.99	0.41
1:C:115:SER:HB2	1:D:118:THR:O	2.21	0.41
1:D:72:GLU:CD	1:D:90:HIS:CD2	2.99	0.41
2:F:41:ILE:N	2:F:41:ILE:CD1	2.82	0.41
2:F:80:THR:HG21	2:F:85:LYS:CB	2.51	0.41
3:L:188:ASP:C	3:L:190:TYR:N	2.71	0.41
4:H:73:VAL:O	4:H:74:THR:C	2.63	0.41
4:H:175:LEU:HA	4:H:180:TYR:CD1	2.55	0.41
3:M:129:LEU:C	3:M:131:SER:N	2.77	0.41
4:N:153:GLU:OE2	4:N:173:ALA:CB	2.69	0.41
1:A:27:ASN:N	1:A:49:THR:HG1	2.19	0.41
1:A:70:LYS:HA	1:A:93:VAL:O	2.21	0.41
1:A:97:ALA:O	1:A:98:ASN:C	2.64	0.41
1:B:7:GLU:CG	1:B:8:SER:H	2.31	0.41
1:B:10:CYS:HA	1:B:11:PRO:HD2	1.91	0.41
1:B:20:VAL:HG12	1:B:21:ARG:N	2.34	0.41
1:D:12:LEU:HD12	1:D:13:MET:H	1.85	0.41
1:D:14:VAL:CG1	1:D:15:LYS:N	2.83	0.41
1:D:17:LEU:HB2	1:D:110:LEU:HD12	2.02	0.41
1:D:63:GLU:C	1:D:65:VAL:N	2.78	0.41
2:F:117:GLN:OE1	2:F:117:GLN:C	2.64	0.41
3:L:153:LYS:HD2	3:L:199:GLU:CD	2.46	0.41
4:H:130:ALA:HA	4:H:131:PRO:HD3	1.80	0.41
4:N:176:GLN:O	4:N:177:SER:HB2	2.21	0.41
1:A:79:TRP:O	1:A:80:LYS:C	2.63	0.41
1:A:110:LEU:HD12	1:A:110:LEU:HA	1.86	0.41
1:B:8:SER:HB2	6:B:128:HOH:O	2.19	0.41
1:B:84:ILE:HD11	2:E:63:LEU:HD21	2.01	0.41
1:B:98:ASN:H	1:B:98:ASN:ND2	2.18	0.41
1:C:16:VAL:HB	1:C:111:LEU:HD21	2.02	0.41
1:C:33:PHE:CD2	1:C:43:PRO:HA	2.56	0.41
1:C:42:GLU:HA	1:C:43:PRO:HD3	1.98	0.41
1:C:45:ALA:N	6:C:138:HOH:O	2.54	0.41
1:D:83:GLY:N	2:F:35:LEU:HD12	2.35	0.41
1:D:124:ASN:CB	1:D:125:PRO:CD	2.99	0.41
2:E:122:LEU:HD22	2:E:122:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:11:VAL:CG2	2:F:12:LYS:H	2.34	0.41
2:F:163:ARG:C	2:F:165:TYR:H	2.29	0.41
3:L:120:SER:O	3:L:139:PHE:N	2.46	0.41
4:H:174:VAL:O	4:H:180:TYR:HA	2.21	0.41
4:H:204:HIS:CD2	4:H:206:ALA:HB3	2.56	0.41
3:M:4:LEU:HD12	3:M:102:PHE:O	2.20	0.41
3:M:4:LEU:HB2	3:M:102:PHE:O	2.20	0.41
3:M:141:ASN:O	3:M:142:ASN:C	2.64	0.41
4:N:23:LYS:HD2	4:N:78:THR:OG1	2.21	0.41
4:N:41:PRO:HB2	4:N:42:GLY:H	1.66	0.41
4:N:74:THR:O	4:N:77:SER:N	2.52	0.41
4:N:105:ASN:CA	4:N:106:GLU:OE1	2.69	0.41
4:N:154:PRO:HB2	4:N:155:VAL:H	1.76	0.41
1:A:35:LYS:HG3	6:A:146:HOH:O	2.20	0.41
1:B:79:TRP:NE1	1:B:112:SER:C	2.79	0.41
1:B:124:ASN:CB	1:B:125:PRO:HD3	2.33	0.41
1:C:65:VAL:HG23	1:C:66:GLU:O	2.21	0.41
1:D:19:ALA:HB2	1:D:110:LEU:HG	2.02	0.41
2:F:117:GLN:CG	2:F:118:TYR:N	2.82	0.41
2:F:121:ARG:C	2:F:122:LEU:HD22	2.46	0.41
2:F:124:ASN:CB	2:F:128:THR:HB	2.50	0.41
3:L:100:TYR:O	3:L:101:THR:HG23	2.21	0.41
3:M:54:ARG:O	3:M:55:ALA:C	2.64	0.41
3:M:120:SER:O	3:M:139:PHE:N	2.45	0.41
3:M:140:LEU:CD2	3:M:150:VAL:CG2	2.98	0.41
4:N:11:LEU:C	4:N:11:LEU:CD2	2.94	0.41
4:N:76:ALA:O	4:N:77:SER:HB3	2.20	0.41
1:A:17:LEU:O	1:A:110:LEU:HD12	2.20	0.40
1:D:27:ASN:N	1:D:49:THR:OG1	2.54	0.40
4:H:9:THR:HG22	4:H:10:VAL:N	2.35	0.40
4:H:153:GLU:OE2	4:H:173:ALA:HB2	2.20	0.40
4:H:175:LEU:HG	4:H:175:LEU:O	2.21	0.40
3:M:28:SER:HA	3:M:73:THR:HG22	2.03	0.40
4:N:40:ARG:HB3	4:N:43:GLN:HG2	2.03	0.40
4:N:134:ALA:O	4:N:135:ALA:HB3	2.21	0.40
4:N:173:ALA:C	4:N:174:VAL:HG13	2.46	0.40
4:N:193:ARG:HG3	4:N:194:PRO:HA	2.03	0.40
1:C:46:SER:OG	1:C:47:GLY:N	2.54	0.40
2:E:1:GLU:HA	2:E:1:GLU:OE1	2.21	0.40
2:F:15:PHE:HB3	2:F:83:PRO:O	2.21	0.40
5:F:178:RTL:H151	5:F:178:RTL:H201	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:87:VAL:HG11	3:L:170:GLN:HB3	2.03	0.40
3:L:112:ARG:CG	3:L:113:ALA:N	2.58	0.40
4:H:150:TYR:O	4:H:151:PHE:HB2	2.21	0.40
3:M:159:ARG:NH1	3:M:161:ASN:HB2	2.37	0.40
4:N:67:LYS:NZ	4:N:85:SER:O	2.55	0.40
4:N:153:GLU:CB	4:N:154:PRO:HA	2.52	0.40
4:N:173:ALA:O	4:N:174:VAL:CG1	2.66	0.40
4:N:175:LEU:HG	4:N:175:LEU:O	2.22	0.40
1:D:105:TYR:CD2	1:D:105:TYR:N	2.89	0.40
2:E:25:TYR:CD2	2:E:141:PRO:HD3	2.56	0.40
2:E:27:MET:O	2:E:167:LEU:HD23	2.21	0.40
2:E:30:LYS:HE3	2:E:161:LEU:HD22	2.04	0.40
2:F:161:LEU:O	2:F:162:ALA:C	2.64	0.40
3:L:21:ILE:HD11	3:L:79:ILE:CD1	2.52	0.40
3:L:136:VAL:C	3:L:182:THR:HG23	2.45	0.40
3:M:80:ASN:HD22	3:M:81:PRO:N	2.20	0.40
4:N:20:MET:HE1	4:N:94:TYR:CD1	2.55	0.40
2:E:140:ASP:C	2:E:142:ASN:N	2.79	0.40
2:E:150:LYS:O	2:E:153:ARG:HB3	2.21	0.40
3:L:54:ARG:O	3:L:56:SER:N	2.54	0.40
3:L:70:GLY:O	3:L:71:SER:CB	2.69	0.40
4:H:132:GLY:O	4:H:133:SER:CB	2.70	0.40
3:M:119:VAL:HG12	3:M:211:LYS:HG3	2.04	0.40
4:N:72:ALA:HB2	4:N:79:ALA:HA	2.02	0.40
1:A:11:PRO:HB2	1:A:64:PHE:HD2	1.86	0.40
1:B:66:GLU:HG3	1:B:99:ASP:HA	2.04	0.40
1:C:35:LYS:NZ	1:C:39:ASP:OD1	2.47	0.40
1:C:99:ASP:CG	1:C:100:SER:N	2.79	0.40
1:D:79:TRP:CH2	6:D:142:HOH:O	2.73	0.40
2:E:5:ARG:HB2	2:E:8:SER:CB	2.51	0.40
2:F:2:ARG:HA	6:F:197:HOH:O	2.21	0.40
3:L:6:GLN:CD	6:L:220:HOH:O	2.64	0.40
3:M:18:ARG:HB2	3:M:80:ASN:OD1	2.22	0.40
3:M:58:LEU:HD21	3:M:62:ILE:O	2.21	0.40
3:M:159:ARG:NH1	3:M:159:ARG:CG	2.84	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	117/127 (92%)	94 (80%)	21 (18%)	2 (2%)	7	27
1	B	117/127 (92%)	97 (83%)	12 (10%)	8 (7%)	1	6
1	C	117/127 (92%)	94 (80%)	20 (17%)	3 (3%)	4	21
1	D	117/127 (92%)	95 (81%)	15 (13%)	7 (6%)	1	7
2	E	172/176 (98%)	127 (74%)	33 (19%)	12 (7%)	1	6
2	F	172/176 (98%)	128 (74%)	32 (19%)	12 (7%)	1	6
3	L	213/215 (99%)	170 (80%)	32 (15%)	11 (5%)	1	10
3	M	213/215 (99%)	170 (80%)	30 (14%)	13 (6%)	1	7
4	H	213/215 (99%)	154 (72%)	41 (19%)	18 (8%)	0	4
4	N	213/215 (99%)	152 (71%)	43 (20%)	18 (8%)	0	4
All	All	1664/1720 (97%)	1281 (77%)	279 (17%)	104 (6%)	1	7

All (104) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	39	ASP
1	B	65	VAL
1	D	39	ASP
1	D	65	VAL
1	D	98	ASN
2	E	2	ARG
2	E	65	ASN
2	E	81	GLU
2	E	164	GLN
2	F	2	ARG
2	F	65	ASN
2	F	81	GLU
2	F	164	GLN
3	L	7	SER

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Mol	Chain	Res	Type
3	L	32	TYR
3	L	55	ALA
3	L	56	SER
4	H	2	VAL
4	H	16	ALA
4	H	34	MET
4	H	41	PRO
4	H	105	ASN
4	H	136	GLN
4	H	138	ASN
4	H	155	VAL
3	M	7	SER
3	M	32	TYR
3	M	55	ALA
3	M	56	SER
4	N	2	VAL
4	N	16	ALA
4	N	34	MET
4	N	41	PRO
4	N	136	GLN
4	N	138	ASN
4	N	155	VAL
1	B	58	LEU
1	B	98	ASN
1	C	38	ASP
1	D	58	LEU
2	E	4	CYS
2	F	4	CYS
3	L	142	ASN
3	L	171	ASP
4	H	62	GLN
4	H	85	SER
4	H	106	GLU
4	H	133	SER
4	H	149	GLY
4	H	206	ALA
3	M	142	ASN
3	M	171	ASP
4	N	22	CYS
4	N	62	GLN
4	N	85	SER
4	N	106	GLU

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Mol	Chain	Res	Type
4	N	133	SER
4	N	149	GLY
4	N	206	ALA
1	A	38	ASP
1	B	90	HIS
1	B	124	ASN
1	D	90	HIS
1	D	124	ASN
2	E	3	ASP
2	E	127	GLY
2	F	3	ASP
2	F	18	ALA
2	F	21	SER
2	F	127	GLY
3	L	71	SER
3	L	125	SER
3	L	130	THR
4	H	22	CYS
3	M	71	SER
3	M	114	ASP
3	M	125	SER
3	M	130	THR
3	M	156	GLY
1	B	102	PRO
1	D	102	PRO
2	E	21	SER
2	E	154	GLN
2	F	154	GLN
2	F	173	TYR
3	L	67	SER
3	L	156	GLY
4	H	124	PRO
3	M	67	SER
4	N	105	ASN
4	N	124	PRO
1	B	76	LYS
2	E	38	GLN
2	E	64	LEU
2	F	91	TRP
3	M	23	CYS
1	A	45	ALA
1	C	45	ALA

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Mol	Chain	Res	Type
1	C	98	ASN
2	E	91	TRP
4	H	104	GLY
4	N	135	ALA
4	H	154	PRO
4	N	154	PRO

5.3.2 Protein sidechains ⓘ

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	100/105 (95%)	89 (89%)	11 (11%)	6	22
1	B	100/105 (95%)	84 (84%)	16 (16%)	2	10
1	C	100/105 (95%)	92 (92%)	8 (8%)	11	36
1	D	100/105 (95%)	84 (84%)	16 (16%)	2	10
2	E	151/152 (99%)	134 (89%)	17 (11%)	5	21
2	F	151/152 (99%)	136 (90%)	15 (10%)	7	27
3	L	190/190 (100%)	171 (90%)	19 (10%)	7	26
3	M	190/190 (100%)	173 (91%)	17 (9%)	9	31
4	H	182/182 (100%)	165 (91%)	17 (9%)	8	29
4	N	182/182 (100%)	164 (90%)	18 (10%)	7	27
All	All	1446/1468 (98%)	1292 (89%)	154 (11%)	6	23

All (154) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	8	SER
1	A	10	CYS
1	A	26	ILE
1	A	39	ASP
1	A	60	THR
1	A	63	GLU
1	A	68	ILE

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Mol	Chain	Res	Type
1	A	75	THR
1	A	80	LYS
1	A	111	LEU
1	A	112	SER
1	B	9	LYS
1	B	10	CYS
1	B	20	VAL
1	B	23	SER
1	B	26	ILE
1	B	32	VAL
1	B	43	PRO
1	B	79	TRP
1	B	82	LEU
1	B	92	GLU
1	B	93	VAL
1	B	111	LEU
1	B	116	TYR
1	B	118	THR
1	B	123	THR
1	B	124	ASN
1	C	10	CYS
1	C	26	ILE
1	C	27	ASN
1	C	39	ASP
1	C	60	THR
1	C	63	GLU
1	C	75	THR
1	C	111	LEU
1	D	9	LYS
1	D	10	CYS
1	D	20	VAL
1	D	26	ILE
1	D	32	VAL
1	D	62	GLU
1	D	79	TRP
1	D	82	LEU
1	D	92	GLU
1	D	93	VAL
1	D	102	PRO
1	D	111	LEU
1	D	116	TYR
1	D	118	THR

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Mol	Chain	Res	Type
1	D	123	THR
1	D	124	ASN
2	E	38	GLN
2	E	49	GLU
2	E	65	ASN
2	E	66	ASN
2	E	67	TRP
2	E	74	VAL
2	E	78	THR
2	E	81	GLU
2	E	93	VAL
2	E	117	GLN
2	E	123	LEU
2	E	131	ASP
2	E	142	ASN
2	E	155	ARG
2	E	166	ARG
2	E	167	LEU
2	E	174	CYS
2	F	10	ARG
2	F	49	GLU
2	F	66	ASN
2	F	67	TRP
2	F	74	VAL
2	F	76	THR
2	F	78	THR
2	F	81	GLU
2	F	93	VAL
2	F	102	ASP
2	F	117	GLN
2	F	123	LEU
2	F	131	ASP
2	F	167	LEU
2	F	174	CYS
3	L	1	ASP
3	L	6	GLN
3	L	9	SER
3	L	18	ARG
3	L	27	GLU
3	L	67	SER
3	L	72	ARG
3	L	85	ASP

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Mol	Chain	Res	Type
3	L	98	ASP
3	L	101	THR
3	L	109	GLU
3	L	124	PRO
3	L	142	ASN
3	L	165	ASN
3	L	168	THR
3	L	175	SER
3	L	179	MET
3	L	185	LEU
3	L	187	LYS
4	H	3	GLN
4	H	11	LEU
4	H	13	ARG
4	H	61	ASN
4	H	62	GLN
4	H	97	THR
4	H	98	ARG
4	H	101	PHE
4	H	103	TYR
4	H	105	ASN
4	H	106	GLU
4	H	110	GLN
4	H	115	THR
4	H	137	THR
4	H	164	LEU
4	H	190	SER
4	H	201	ASN
3	M	1	ASP
3	M	18	ARG
3	M	27	GLU
3	M	34	ASN
3	M	35	SER
3	M	67	SER
3	M	72	ARG
3	M	85	ASP
3	M	98	ASP
3	M	101	THR
3	M	109	GLU
3	M	142	ASN
3	M	165	ASN
3	M	175	SER

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Mol	Chain	Res	Type
3	M	179	MET
3	M	185	LEU
3	M	187	LYS
4	N	3	GLN
4	N	11	LEU
4	N	13	ARG
4	N	62	GLN
4	N	97	THR
4	N	98	ARG
4	N	101	PHE
4	N	103	TYR
4	N	106	GLU
4	N	110	GLN
4	N	115	THR
4	N	137	THR
4	N	155	VAL
4	N	164	LEU
4	N	178	ASP
4	N	190	SER
4	N	201	ASN
4	N	208	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (50) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	98	ASN
1	B	90	HIS
1	B	98	ASN
1	C	31	HIS
1	C	98	ASN
1	D	90	HIS
1	D	98	ASN
1	D	124	ASN
2	E	104	HIS
2	E	117	GLN
2	E	156	GLN
2	E	164	GLN
2	E	170	HIS
2	F	38	GLN
2	F	65	ASN
2	F	66	ASN
2	F	98	GLN

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Mol	Chain	Res	Type
2	F	149	GLN
2	F	156	GLN
2	F	164	GLN
2	F	170	HIS
3	L	17	GLN
3	L	34	ASN
3	L	57	ASN
3	L	80	ASN
3	L	93	GLN
3	L	141	ASN
3	L	165	ASN
3	L	170	GLN
3	L	193	HIS
3	L	214	ASN
4	H	3	GLN
4	H	57	HIS
4	H	61	ASN
4	H	62	GLN
4	H	105	ASN
4	H	110	GLN
3	M	46	GLN
3	M	57	ASN
3	M	80	ASN
3	M	141	ASN
3	M	161	ASN
3	M	165	ASN
3	M	214	ASN
4	N	3	GLN
4	N	57	HIS
4	N	61	ASN
4	N	62	GLN
4	N	105	ASN
4	N	110	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

2 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	RTL	E	177	-	21,21,21	1.00	1 (4%)	28,28,28	1.45	4 (14%)
5	RTL	F	178	-	21,21,21	1.33	1 (4%)	28,28,28	1.45	5 (17%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	RTL	E	177	-	-	0/14/31/31	0/1/1/1
5	RTL	F	178	-	-	0/14/31/31	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	F	178	RTL	C5-C6	3.94	1.41	1.34
5	E	177	RTL	C5-C6	3.33	1.40	1.34

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	E	177	RTL	C7-C8-C9	-3.22	121.47	126.23
5	E	177	RTL	C20-C13-C12	2.97	122.63	118.09
5	F	178	RTL	C15-C14-C13	-2.64	122.33	126.61
5	F	178	RTL	C18-C5-C6	-2.59	121.66	124.48
5	E	177	RTL	C10-C11-C12	-2.43	116.15	123.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	E	177	RTL	C12-C13-C14	-2.28	115.31	118.49
5	F	178	RTL	C11-C10-C9	-2.25	124.12	127.28
5	F	178	RTL	C19-C9-C8	2.23	121.50	118.09
5	F	178	RTL	C7-C8-C9	-2.21	122.97	126.23

There are no chirality outliers.

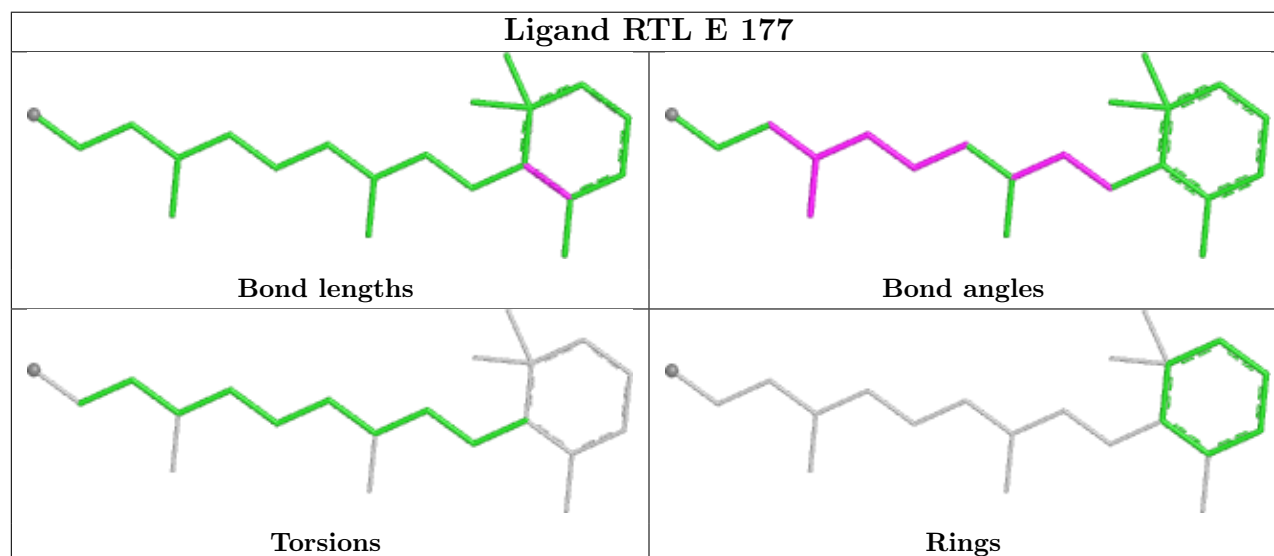
There are no torsion outliers.

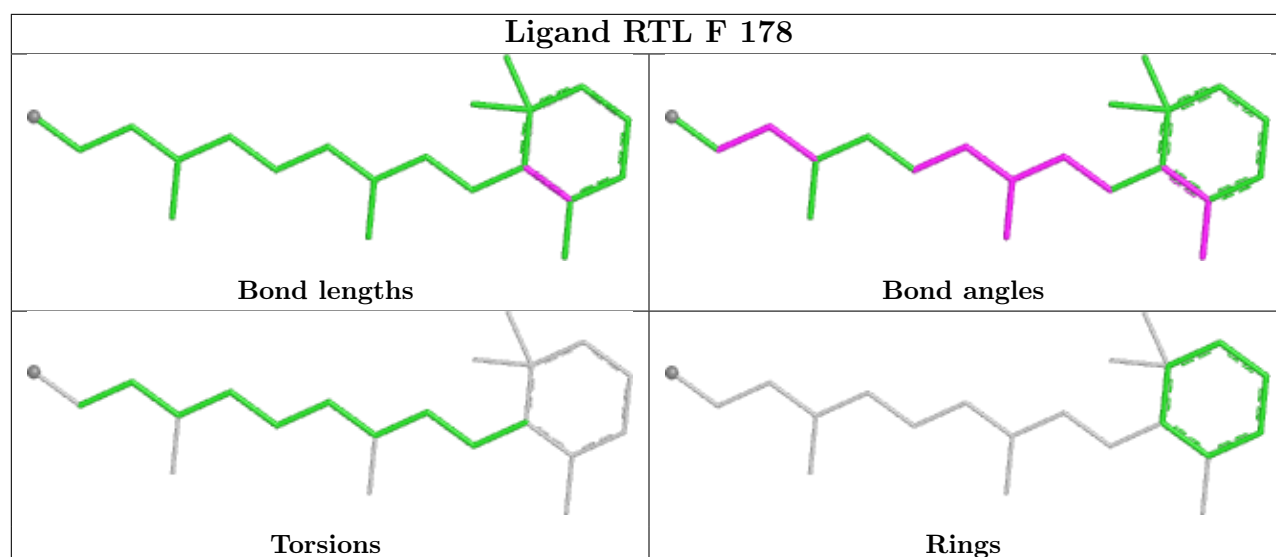
There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	E	177	RTL	1	0
5	F	178	RTL	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





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	119/127 (93%)	0.06	1 (0%) 82 70	4, 23, 47, 66	0
1	B	119/127 (93%)	0.11	4 (3%) 48 35	4, 22, 53, 67	0
1	C	119/127 (93%)	0.10	1 (0%) 82 70	5, 26, 51, 62	0
1	D	119/127 (93%)	0.21	5 (4%) 40 29	3, 27, 57, 68	0
2	E	174/176 (98%)	0.12	3 (1%) 69 53	2, 21, 41, 67	0
2	F	174/176 (98%)	-0.01	0 100 100	9, 25, 41, 70	0
3	L	215/215 (100%)	0.61	10 (4%) 36 27	32, 42, 50, 53	0
3	M	215/215 (100%)	0.59	9 (4%) 40 29	38, 45, 53, 57	0
4	H	215/215 (100%)	0.60	16 (7%) 20 17	35, 42, 60, 96	0
4	N	215/215 (100%)	0.57	14 (6%) 25 19	37, 46, 63, 98	0
All	All	1684/1720 (97%)	0.35	63 (3%) 45 32	2, 40, 53, 98	0

All (63) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	H	139	SER	6.6
4	N	105	ASN	5.5
3	M	185	LEU	4.5
4	N	138	ASN	4.0
4	H	105	ASN	4.0
4	H	43	GLN	3.9
4	N	106	GLU	3.7
3	L	128	GLN	3.5
4	N	5	GLN	3.5
1	A	8	SER	3.4
3	L	194	ASN	3.3
1	D	62	GLU	3.3
4	N	86	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
3	L	133	GLY	3.2
3	M	160	GLN	3.2
3	L	163	VAL	3.2
4	N	190	SER	3.2
1	B	125	PRO	2.9
1	D	8	SER	2.9
3	L	1	ASP	2.9
2	E	55	ALA	2.9
3	M	109	GLU	2.9
4	N	102	ASP	2.9
4	H	138	ASN	2.8
4	H	15	GLY	2.8
4	H	87	THR	2.7
3	L	129	LEU	2.7
4	N	134	ALA	2.7
2	E	3	ASP	2.6
1	D	61	GLU	2.5
1	B	39	ASP	2.5
1	C	37	ALA	2.5
4	H	161	SER	2.4
3	L	7	SER	2.4
4	H	135	ALA	2.4
4	H	190	SER	2.4
4	N	195	SER	2.4
3	L	115	ALA	2.4
4	N	150	TYR	2.3
4	H	134	ALA	2.3
4	N	200	CYS	2.3
4	H	175	LEU	2.3
1	D	11	PRO	2.3
2	E	49	GLU	2.3
1	D	38	ASP	2.3
3	M	188	ASP	2.3
3	M	165	ASN	2.2
3	M	189	GLU	2.2
4	N	87	THR	2.2
4	H	214	LYS	2.2
1	B	62	GLU	2.2
4	H	8	GLY	2.2
4	N	212	ASP	2.2
4	H	189	PRO	2.1
1	B	10	CYS	2.1

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Mol	Chain	Res	Type	RSRZ
3	L	80	ASN	2.1
3	M	129	LEU	2.1
4	H	54	GLY	2.1
4	N	64	PHE	2.1
3	M	167	TRP	2.1
3	M	194	ASN	2.1
3	L	187	LYS	2.0
4	H	136	GLN	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 oligosaccharides in this entry.

6.4 Ligands [i](#)

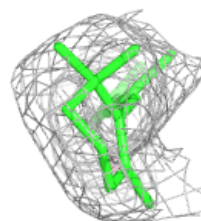
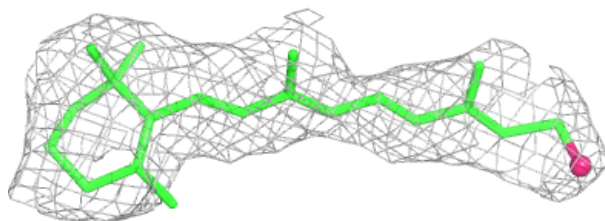
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
5	RTL	F	178	21/21	0.93	0.09	11,14,24,24	0
5	RTL	E	177	21/21	0.94	0.09	0,4,12,16	0

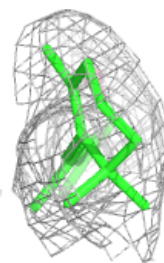
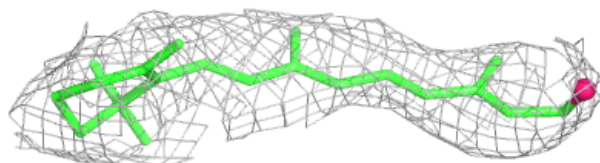
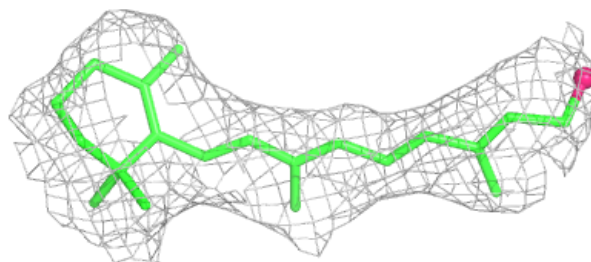
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around RTL F 178:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around RTL E 177:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.