



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 29, 2025 – 08:47 AM EDT

PDB ID : 2B5L / pdb_00002b5l
Title : Crystal Structure of DDB1 In Complex with Simian Virus 5 V Protein
Authors : Li, T.; Chen, X.; Garbutt, K.C.; Zhou, P.; Zheng, N.
Deposited on : 2005-09-28
Resolution : 2.85 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 Phenix2.0rc1
Xtriage (Phenix) : 2.0rc1
EDS : 3.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4 : 9.0.006 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.43.1

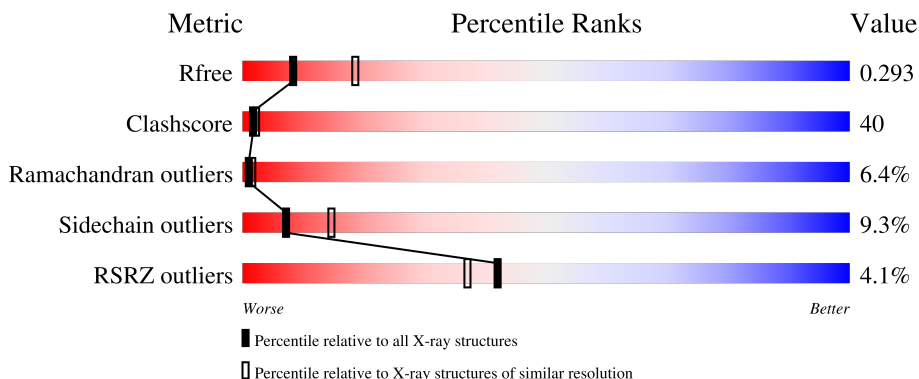
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

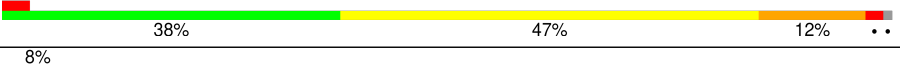
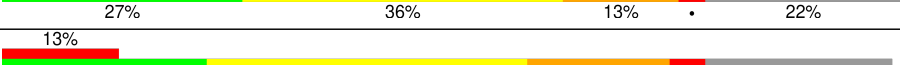
The reported resolution of this entry is 2.85 Å.

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}	164625	1268 (2.88-2.84)
Clashscore	180529	1351 (2.88-2.84)
Ramachandran outliers	177936	1318 (2.88-2.84)
Sidechain outliers	177891	1319 (2.88-2.84)
RSRZ outliers	164620	1269 (2.88-2.84)

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	1140	
1	B	1140	
2	C	222	
2	D	222	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 20399 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 damage-specific DNA binding protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1132	Total	C	N	O	S	0	0	0
			8860	5610	1493	1708	49			
1	B	1134	Total	C	N	O	S	0	0	0
			8876	5619	1495	1713	49			

- Molecule 2 is a protein called Nonstructural protein V.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	174	Total	C	N	O	S	0	0	0
			1324	826	229	261	8			
2	D	175	Total	C	N	O	S	0	0	0
			1335	834	233	260	8			

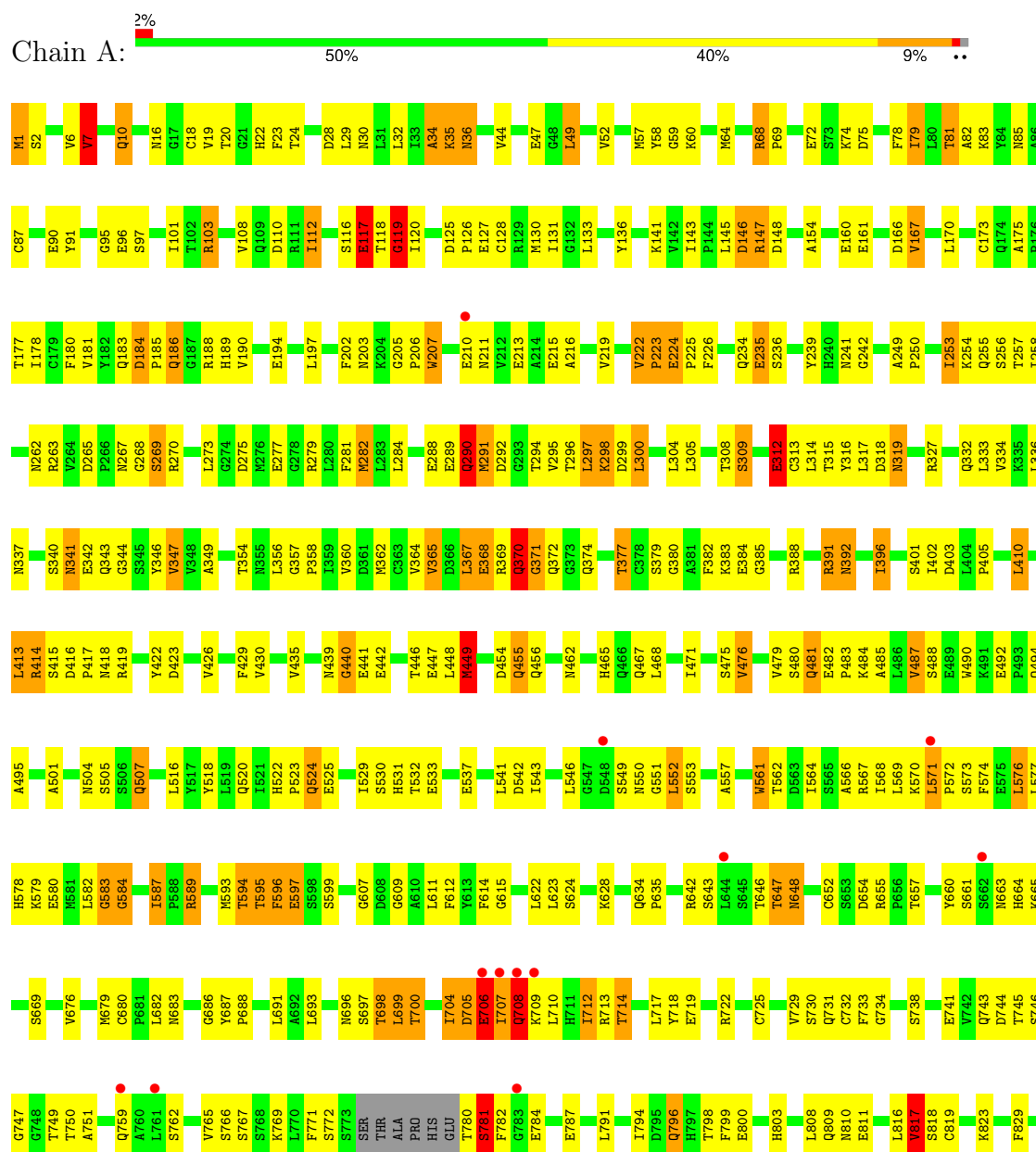
- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn).

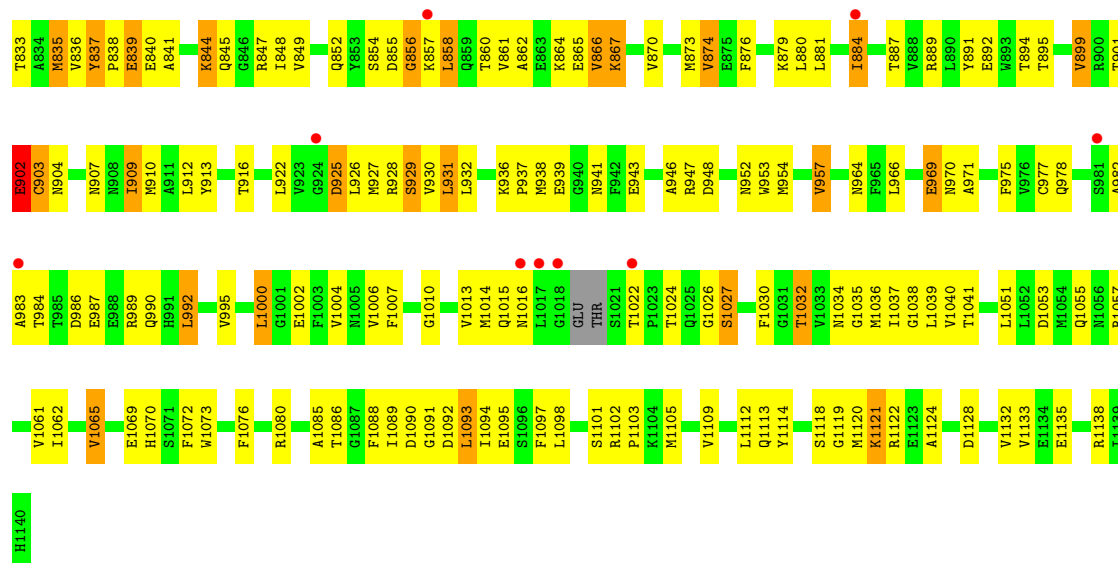
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	C	2	Total	Zn	0	0
			2	2		
3	D	2	Total	Zn	0	0
			2	2		

3 Residue-property plots

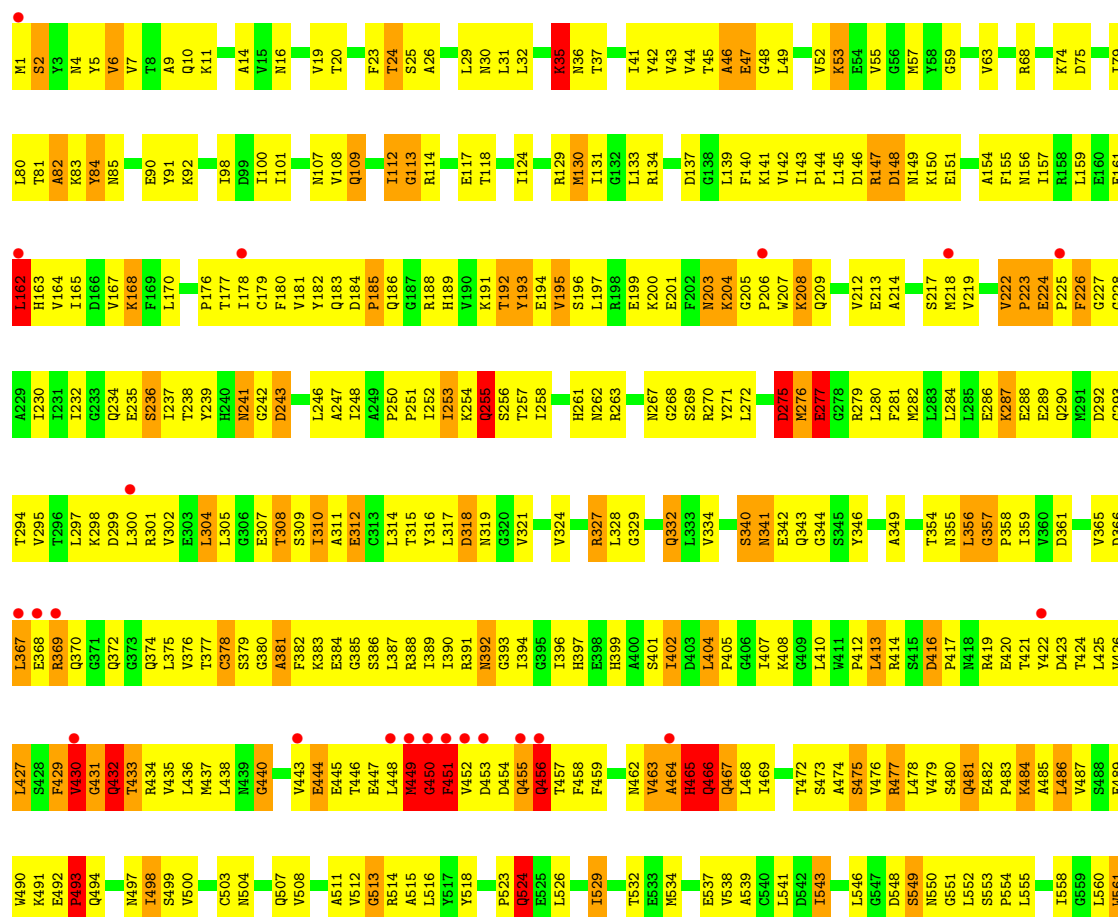
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

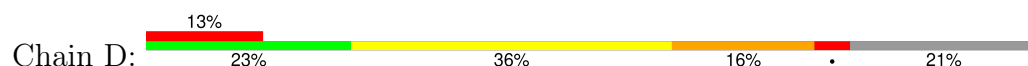
- Molecule 1: damage-specific DNA binding protein 1

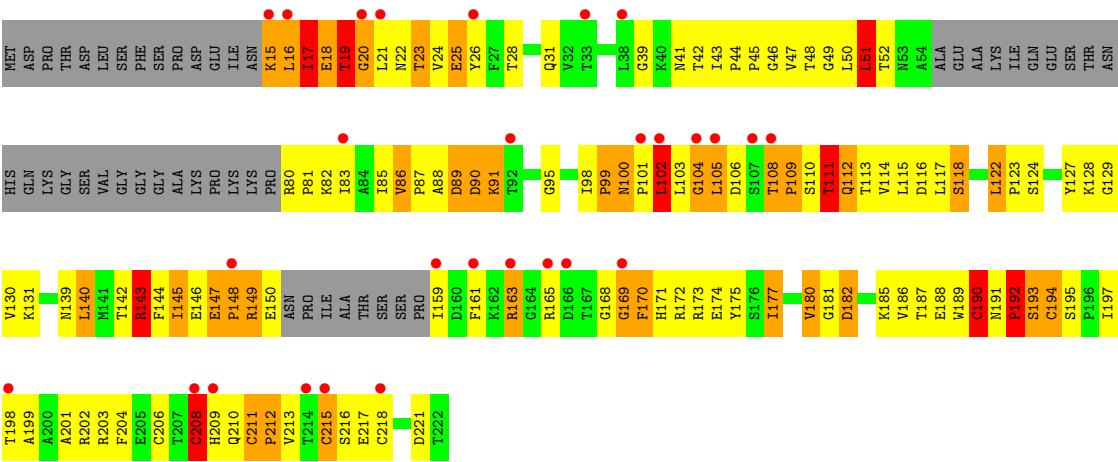




• Molecule 1: damage-specific DNA binding protein 1







4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	62.76Å 240.79Å 117.18Å 90.00° 101.79° 90.00°	Depositor
Resolution (Å)	47.80 – 2.85 47.80 – 2.85	Depositor EDS
% Data completeness (in resolution range)	(Not available) (47.80-2.85) 95.7 (47.80-2.85)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.84 (at 2.65Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.229 , 0.299 0.226 , 0.293	Depositor DCC
R_{free} test set	3805 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	46.9	Xtriage
Anisotropy	0.604	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 64.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	20399	wwPDB-VP
Average B, all atoms (Å ²)	64.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.54% 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: ZN

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	0.57	5/9022 (0.1%)	1.13	81/12219 (0.7%)
1	B	0.60	14/9039 (0.2%)	1.32	118/12244 (1.0%)
2	C	0.79	8/1351 (0.6%)	1.42	27/1832 (1.5%)
2	D	1.08	4/1361 (0.3%)	1.63	32/1843 (1.7%)
All	All	0.64	31/20773 (0.1%)	1.27	258/28138 (0.9%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	1	1
2	D	0	1
All	All	1	2

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	189	TRP	C-N	-25.44	0.99	1.33
2	D	190	CYS	C-N	17.91	1.59	1.33
1	B	431	GLY	N-CA	-12.68	1.35	1.45
1	B	430	VAL	C-N	-9.31	1.25	1.33
1	B	455	GLN	N-CA	-8.16	1.35	1.46
1	A	706	GLU	C-N	-8.13	1.26	1.33
2	C	37	SER	CA-C	-7.72	1.45	1.53
1	B	429	PHE	CA-C	-7.55	1.44	1.53
1	B	749	THR	C-N	-7.36	1.23	1.33
1	B	748	GLY	N-CA	-7.27	1.34	1.45
1	B	430	VAL	N-CA	-7.01	1.37	1.46
2	C	190	CYS	C-N	7.00	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	750	THR	N-CA	-6.29	1.38	1.46
2	D	170	PHE	N-CA	-6.28	1.37	1.45
1	A	597	GLU	N-CA	-6.19	1.40	1.46
1	A	707	ILE	N-CA	-6.03	1.39	1.46
2	C	36	SER	C-N	-5.80	1.26	1.34
1	A	596	PHE	C-N	-5.60	1.27	1.33
1	A	899	VAL	CA-CB	5.47	1.60	1.54
1	B	464	ALA	N-CA	5.47	1.53	1.46
2	C	36	SER	N-CA	-5.46	1.39	1.46
1	B	429	PHE	CA-CB	-5.46	1.48	1.53
2	C	38	LEU	N-CA	-5.40	1.39	1.46
1	B	192	THR	C-N	-5.35	1.26	1.33
1	B	450	GLY	C-N	-5.32	1.26	1.33
1	B	450	GLY	CA-C	-5.24	1.44	1.51
2	C	33	THR	CB-OG1	5.21	1.52	1.43
2	C	53	ASN	N-CA	-5.18	1.39	1.46
2	D	169	GLY	C-N	-5.17	1.26	1.33
2	C	37	SER	C-N	-5.04	1.26	1.33
1	B	366	ASP	CA-C	-5.01	1.47	1.53

All (258) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	431	GLY	N-CA-C	-42.26	71.75	110.21
1	B	749	THR	N-CA-C	-31.14	58.10	108.55
1	B	35	LYS	CB-CA-C	18.23	146.70	110.42
1	B	980	ASP	N-CA-C	-17.33	78.02	108.69
1	B	884	ILE	CB-CA-C	16.86	138.94	111.29
1	B	942	PHE	CB-CA-C	-16.67	85.50	111.17
2	D	15	LYS	N-CA-C	-16.37	65.16	111.00
1	B	749	THR	N-CA-CB	14.95	137.44	110.99
2	D	16	LEU	N-CA-CB	-14.10	89.87	110.17
1	A	202	PHE	CB-CA-C	-13.28	89.36	110.74
2	D	17	ILE	N-CA-CB	-13.01	95.51	111.90
2	D	189	TRP	CA-C-N	12.47	140.58	122.99
2	D	189	TRP	C-N-CA	12.47	140.58	122.99
1	B	2	SER	N-CA-CB	-12.07	90.44	111.08
1	B	980	ASP	CB-CA-C	-11.54	89.46	109.65
1	B	885	ASN	N-CA-C	-11.16	94.72	111.34
1	B	748	GLY	N-CA-C	11.04	139.33	113.18
1	A	708	GLN	OE1-CD-NE2	-10.95	111.65	122.60
2	D	111	THR	N-CA-C	-10.92	90.86	108.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	431	GLY	O-C-N	10.80	127.90	121.85
2	D	16	LEU	CB-CA-C	-10.79	89.69	109.54
1	B	430	VAL	CA-C-N	-10.74	107.85	123.95
1	B	430	VAL	C-N-CA	-10.74	107.85	123.95
2	D	143	ARG	CB-CA-C	-10.34	89.84	110.42
1	B	185	PRO	CA-N-CD	-10.21	97.70	112.00
2	D	112	GLN	OE1-CD-NE2	-10.21	112.39	122.60
1	B	117	GLU	N-CA-C	10.16	124.94	112.54
1	B	186	GLN	OE1-CD-NE2	-10.15	112.44	122.60
1	B	561	TRP	N-CA-C	10.14	128.82	113.61
1	B	743	GLN	OE1-CD-NE2	-10.03	112.57	122.60
2	C	52	THR	CA-C-N	-9.95	105.15	122.07
2	C	52	THR	C-N-CA	-9.95	105.15	122.07
1	B	467	GLN	OE1-CD-NE2	-9.92	112.68	122.60
2	D	192	PRO	CA-N-CD	-9.90	98.15	112.00
1	B	370	GLN	OE1-CD-NE2	-9.88	112.72	122.60
2	C	36	SER	N-CA-C	-9.85	94.42	109.79
1	A	290	GLN	OE1-CD-NE2	-9.82	112.78	122.60
1	B	456	GLN	OE1-CD-NE2	-9.77	112.83	122.60
1	B	455	GLN	OE1-CD-NE2	-9.74	112.86	122.60
1	B	981	SER	N-CA-CB	-9.64	93.67	110.44
1	B	466	GLN	OE1-CD-NE2	-9.61	112.99	122.60
1	A	370	GLN	OE1-CD-NE2	-9.55	113.05	122.60
2	D	181	GLY	N-CA-C	-9.33	103.09	111.67
2	D	189	TRP	O-C-N	-9.17	114.12	123.29
2	C	86	VAL	N-CA-C	9.15	116.70	109.19
1	A	909	ILE	N-CA-C	-9.03	103.06	111.45
1	B	36	ASN	N-CA-CB	-9.03	95.24	110.49
1	B	451	PHE	CB-CA-C	-8.97	92.56	110.42
1	B	455	GLN	N-CA-C	-8.94	91.77	110.80
1	B	1	MET	CB-CA-C	8.93	127.06	110.10
2	D	19	THR	CA-C-N	-8.90	103.96	121.41
2	D	19	THR	C-N-CA	-8.90	103.96	121.41
1	A	609	GLY	N-CA-C	-8.90	102.89	115.43
1	A	290	GLN	CB-CA-C	8.89	128.12	110.42
2	C	37	SER	N-CA-C	-8.86	92.14	107.20
1	B	432	GLN	OE1-CD-NE2	-8.86	113.75	122.60
2	D	15	LYS	CB-CA-C	8.83	126.87	110.10
1	B	193	TYR	N-CA-C	-8.76	95.23	108.46
1	A	712	ILE	N-CA-C	8.49	118.91	106.85
1	B	561	TRP	CB-CA-C	-8.48	95.23	109.99
2	C	37	SER	CB-CA-C	-8.41	101.00	111.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	16	LEU	N-CA-C	-8.41	98.64	110.50
1	B	885	ASN	N-CA-CB	-8.36	93.81	111.21
1	B	429	PHE	N-CA-C	-8.23	91.63	108.18
1	A	925	ASP	CA-CB-CG	8.21	120.81	112.60
1	B	1107	GLU	N-CA-C	-8.16	102.39	111.28
2	C	211	CYS	CA-C-N	8.10	129.18	120.11
2	C	211	CYS	C-N-CA	8.10	129.18	120.11
1	A	312	GLU	N-CA-C	-8.04	102.23	112.93
1	A	1061	VAL	N-CA-C	8.01	118.70	111.81
1	B	185	PRO	N-CA-C	7.99	128.92	112.47
1	A	561	TRP	N-CA-C	7.82	119.58	111.14
1	B	750	THR	CB-CA-C	-7.72	95.06	110.42
1	B	431	GLY	CA-C-N	7.70	136.25	121.54
1	B	431	GLY	C-N-CA	7.70	136.25	121.54
1	B	277	GLU	N-CA-C	-7.69	103.72	113.72
1	B	35	LYS	N-CA-C	-7.66	94.47	110.80
2	C	182	ASP	N-CA-C	-7.57	104.55	114.31
2	D	20	GLY	N-CA-C	7.50	130.95	113.18
1	B	312	GLU	N-CA-C	-7.49	102.05	112.45
1	A	1004	VAL	N-CA-C	7.42	118.97	108.36
1	B	186	GLN	CG-CD-NE2	7.41	127.52	116.40
1	B	455	GLN	CG-CD-NE2	7.40	127.50	116.40
1	A	562	THR	N-CA-C	7.39	120.77	111.24
1	B	598	SER	N-CA-C	-7.37	101.13	112.99
2	D	112	GLN	CG-CD-NE2	7.30	127.35	116.40
2	C	190	CYS	O-C-N	7.29	132.47	123.21
1	A	930	VAL	N-CA-C	7.28	117.99	110.05
1	A	35	LYS	CB-CA-C	7.25	124.85	110.42
2	D	211	CYS	CA-C-N	7.22	128.87	119.84
2	D	211	CYS	C-N-CA	7.22	128.87	119.84
1	B	36	ASN	N-CA-C	-7.19	95.49	110.80
1	B	746	SER	CB-CA-C	-7.19	100.31	111.74
1	B	378	CYS	N-CA-C	-7.19	97.02	108.73
1	B	467	GLN	CG-CD-NE2	7.18	127.17	116.40
2	C	53	ASN	CB-CA-C	7.17	122.35	110.88
1	A	290	GLN	CG-CD-NE2	7.07	127.00	116.40
1	B	895	THR	N-CA-C	-7.05	103.61	111.71
1	A	370	GLN	CG-CD-NE2	6.99	126.89	116.40
1	A	597	GLU	N-CA-C	-6.98	100.94	111.34
1	A	211	ASN	N-CA-C	6.97	119.06	110.91
1	B	449	MET	O-C-N	6.96	129.27	122.03
1	B	222	VAL	CA-C-N	6.90	128.47	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	222	VAL	C-N-CA	6.90	128.47	119.84
1	A	902	GLU	CA-CB-CG	6.87	127.83	114.10
1	B	82	ALA	N-CA-C	-6.85	104.19	112.54
1	B	743	GLN	CG-CD-NE2	6.81	126.62	116.40
2	C	212	PRO	N-CA-C	6.81	121.07	111.33
1	B	108	VAL	N-CA-C	6.78	118.82	111.77
1	A	698	THR	N-CA-C	6.76	120.18	109.50
1	A	861	VAL	N-CA-C	6.76	116.85	110.30
1	B	463	VAL	CA-C-N	6.74	134.41	121.54
1	B	463	VAL	C-N-CA	6.74	134.41	121.54
2	D	17	ILE	N-CA-C	-6.74	96.57	107.28
1	A	96	GLU	N-CA-C	-6.72	105.19	113.19
1	B	456	GLN	CG-CD-NE2	6.72	126.48	116.40
1	A	117	GLU	N-CA-C	-6.69	99.36	109.60
1	B	432	GLN	CG-CD-NE2	6.67	126.41	116.40
1	B	332	GLN	N-CA-C	6.66	118.88	108.96
1	B	466	GLN	CG-CD-NE2	6.63	126.35	116.40
1	A	902	GLU	N-CA-C	-6.58	96.79	110.80
2	D	102	LEU	N-CA-CB	-6.53	99.46	110.49
1	A	36	ASN	CA-CB-CG	6.50	119.10	112.60
2	D	195	SER	CA-C-N	6.50	126.41	119.85
2	D	195	SER	C-N-CA	6.50	126.41	119.85
1	B	416	ASP	CA-C-N	6.49	126.18	119.56
1	B	416	ASP	C-N-CA	6.49	126.18	119.56
1	A	687	TYR	CA-C-N	6.46	126.81	119.83
1	A	687	TYR	C-N-CA	6.46	126.81	119.83
1	A	708	GLN	CG-CD-NE2	6.46	126.08	116.40
1	A	595	THR	CA-C-N	-6.44	110.49	122.60
1	A	595	THR	C-N-CA	-6.44	110.49	122.60
1	B	1006	VAL	N-CA-C	6.43	116.29	108.06
1	B	370	GLN	CG-CD-NE2	6.41	126.02	116.40
1	A	573	SER	N-CA-C	6.40	121.09	113.16
2	C	37	SER	N-CA-CB	6.36	120.66	110.86
2	D	182	ASP	CA-CB-CG	-6.35	106.25	112.60
1	B	327	ARG	N-CA-C	-6.35	106.12	114.31
2	C	216	SER	N-CA-C	-6.33	104.82	113.30
1	A	706	GLU	CA-C-N	-6.30	113.52	121.96
1	A	706	GLU	C-N-CA	-6.30	113.52	121.96
1	B	615	GLY	N-CA-C	-6.29	101.77	111.64
1	B	118	THR	N-CA-C	-6.28	106.15	113.88
1	A	382	PHE	CB-CA-C	-6.27	109.33	116.54
1	B	455	GLN	CB-CA-C	6.23	122.82	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	205	GLY	CA-C-N	6.22	127.62	119.84
1	A	205	GLY	C-N-CA	6.22	127.62	119.84
1	B	429	PHE	CB-CA-C	-6.20	101.50	111.86
2	C	206	CYS	N-CA-C	6.19	119.56	109.59
1	A	290	GLN	CB-CG-CD	6.18	123.11	112.60
1	B	449	MET	CA-C-N	6.14	133.45	121.41
1	B	449	MET	C-N-CA	6.14	133.45	121.41
1	B	747	GLY	O-C-N	6.13	130.67	122.70
2	C	53	ASN	CA-C-O	6.07	128.00	121.02
1	B	743	GLN	CA-C-N	6.04	131.41	121.39
1	B	743	GLN	C-N-CA	6.04	131.41	121.39
2	D	118	SER	N-CA-C	-6.01	105.90	113.18
1	A	902	GLU	N-CA-CB	5.99	120.61	110.49
1	B	1126	ALA	N-CA-C	-5.98	104.88	111.82
1	A	1006	VAL	N-CA-C	5.97	117.28	108.45
1	A	413	LEU	N-CA-C	5.93	118.30	108.99
1	B	464	ALA	N-CA-C	5.93	123.43	110.80
1	B	837	TYR	CA-C-N	5.93	127.25	119.84
1	B	837	TYR	C-N-CA	5.93	127.25	119.84
1	A	902	GLU	CB-CG-CD	-5.91	102.55	112.60
1	A	347	VAL	N-CA-C	5.88	117.22	108.23
1	A	895	THR	N-CA-C	-5.87	106.07	113.18
1	B	429	PHE	CA-C-N	-5.86	111.42	121.97
1	B	429	PHE	C-N-CA	-5.86	111.42	121.97
2	C	139	ASN	CA-C-N	-5.83	113.25	122.23
2	C	139	ASN	C-N-CA	-5.83	113.25	122.23
2	C	177	ILE	N-CA-C	5.83	117.14	108.46
1	B	942	PHE	N-CA-C	5.81	119.85	107.70
1	A	501	ALA	N-CA-C	5.78	117.80	107.80
1	B	645	SER	N-CA-C	-5.78	107.47	114.75
1	B	420	GLU	N-CA-C	-5.77	104.59	111.69
1	A	309	SER	N-CA-C	-5.76	102.77	110.55
1	A	34	ALA	CA-C-N	-5.75	110.55	121.54
1	A	34	ALA	C-N-CA	-5.75	110.55	121.54
1	A	1092	ASP	N-CA-C	-5.74	104.94	111.14
2	C	53	ASN	O-C-N	5.72	130.26	122.48
2	C	194	CYS	CA-CB-SG	5.71	127.52	114.40
1	A	370	GLN	CB-CG-CD	5.67	122.25	112.60
1	B	413	LEU	N-CA-C	5.67	117.13	108.52
1	B	901	THR	N-CA-C	5.67	118.23	110.24
1	B	831	VAL	N-CA-C	5.66	116.04	108.11
1	A	836	VAL	N-CA-C	5.66	116.25	107.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	465	HIS	CB-CA-C	-5.65	99.17	110.42
2	C	138	GLU	N-CA-C	5.65	117.44	111.28
1	A	862	ALA	N-CA-C	5.64	116.81	108.86
1	A	615	GLY	N-CA-C	-5.63	102.81	111.64
1	B	555	LEU	N-CA-C	5.61	118.61	109.24
2	C	53	ASN	CA-CB-CG	-5.60	107.00	112.60
1	B	1053	ASP	N-CA-C	-5.57	105.12	111.14
1	B	1045	GLU	N-CA-C	-5.57	105.75	112.54
1	A	530	SER	N-CA-C	5.56	115.18	107.73
2	D	124	SER	N-CA-C	5.54	116.82	108.46
1	A	837	TYR	CA-C-N	5.50	125.85	119.47
1	A	837	TYR	C-N-CA	5.50	125.85	119.47
1	A	435	VAL	N-CA-C	5.47	115.66	107.51
1	A	49	LEU	N-CA-C	5.46	117.62	108.73
2	D	208	CYS	CA-CB-SG	5.45	126.93	114.40
1	B	195	VAL	N-CA-C	5.44	115.96	108.12
1	B	84	TYR	N-CA-C	5.44	119.21	112.58
1	B	455	GLN	CA-CB-CG	-5.42	103.26	114.10
1	B	720	SER	N-CA-C	5.41	119.24	109.44
1	A	119	GLY	N-CA-C	5.41	125.99	113.18
1	B	587	ILE	CA-C-N	5.41	126.25	119.98
1	B	587	ILE	C-N-CA	5.41	126.25	119.98
1	A	120	ILE	N-CA-C	5.38	115.94	108.84
2	D	177	ILE	N-CA-C	5.38	117.13	108.85
2	C	172	ARG	CA-C-N	5.36	128.96	121.24
2	C	172	ARG	C-N-CA	5.36	128.96	121.24
1	B	1092	ASP	N-CA-C	-5.36	105.36	111.14
2	C	108	THR	CA-C-N	-5.33	113.18	119.84
2	C	108	THR	C-N-CA	-5.33	113.18	119.84
1	B	465	HIS	N-CA-CB	5.31	119.46	110.49
1	A	418	ASN	N-CA-C	5.29	118.07	111.24
1	B	970	ASN	N-CA-C	5.29	119.48	113.19
1	A	699	LEU	N-CA-C	-5.28	102.70	110.52
1	A	1072	PHE	N-CA-C	-5.27	105.44	111.14
1	B	308	THR	CB-CA-C	-5.25	109.50	117.07
1	A	223	PRO	N-CA-C	5.24	118.82	111.33
1	A	332	GLN	N-CA-C	5.22	116.74	108.96
1	A	833	THR	N-CA-C	5.22	116.22	108.86
1	B	1004	VAL	N-CA-C	5.21	115.82	109.30
1	A	887	THR	N-CA-C	5.21	118.05	109.72
1	B	913	TYR	N-CA-C	5.20	117.37	108.90
1	B	912	LEU	N-CA-C	5.19	118.77	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	749	THR	CB-CA-C	5.18	119.18	109.86
1	B	366	ASP	CA-C-N	5.17	129.48	121.26
1	B	366	ASP	C-N-CA	5.17	129.48	121.26
1	A	1076	PHE	N-CA-C	-5.16	102.96	110.24
2	D	147	GLU	CA-C-N	5.16	126.29	119.84
2	D	147	GLU	C-N-CA	5.16	126.29	119.84
1	A	1065	VAL	N-CA-C	5.15	120.05	109.34
1	A	844	LYS	N-CA-C	-5.14	106.97	114.12
1	A	566	ALA	N-CA-C	-5.13	100.54	108.90
1	A	7	VAL	CB-CA-C	-5.12	102.49	110.69
1	A	207	TRP	N-CA-C	5.12	117.20	109.41
1	A	222	VAL	CA-C-N	5.12	125.84	120.11
1	A	222	VAL	C-N-CA	5.12	125.84	120.11
1	A	903	CYS	N-CA-C	5.11	118.00	110.59
1	B	404	LEU	CA-C-N	5.10	125.00	119.85
1	B	404	LEU	C-N-CA	5.10	125.00	119.85
1	B	780	THR	CA-C-N	5.09	131.26	121.54
1	B	780	THR	C-N-CA	5.09	131.26	121.54
1	B	989	ARG	N-CA-C	-5.09	107.03	113.18
1	A	541	LEU	N-CA-C	5.08	117.11	109.23
1	B	1105	MET	N-CA-C	-5.07	105.94	111.82
1	A	377	THR	N-CA-C	5.07	117.85	109.85
1	B	451	PHE	CB-CG-CD1	-5.05	112.11	120.70
1	A	87	CYS	N-CA-C	5.04	116.19	108.42
1	B	162	LEU	N-CA-C	5.04	116.62	111.03
1	A	505	SER	N-CA-C	5.04	117.50	111.71
2	D	100	ASN	N-CA-C	-5.03	103.74	110.07
1	B	744	ASP	CA-C-N	-5.00	112.38	121.14
1	B	744	ASP	C-N-CA	-5.00	112.38	121.14

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	1	MET	CA

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	430	VAL	Peptide
2	D	190	CYS	Mainchain

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	8860	0	8828	495	0
1	B	8876	0	8842	826	0
2	C	1324	0	1306	134	0
2	D	1335	0	1323	179	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
All	All	20399	0	20299	1618	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 40.

All (1618) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:367:LEU:HD21	1:B:374:GLN:CG	1.51	1.38
1:B:367:LEU:HD21	1:B:374:GLN:CB	1.50	1.37
1:B:367:LEU:CD2	1:B:374:GLN:HB2	1.53	1.37
1:B:742:VAL:CG2	1:B:750:THR:HG21	1.57	1.35
1:B:367:LEU:CD2	1:B:374:GLN:CG	2.06	1.34
1:B:367:LEU:HD13	1:B:374:GLN:CD	1.51	1.33
2:D:169:GLY:O	2:D:212:PRO:CD	1.75	1.33
1:B:367:LEU:CD2	1:B:374:GLN:CB	2.08	1.31
1:B:367:LEU:CD1	1:B:374:GLN:OE1	1.79	1.31
1:B:432:GLN:OE1	1:B:454:ASP:CB	1.79	1.31
1:B:367:LEU:O	1:B:368:GLU:HG2	1.12	1.29
2:D:169:GLY:O	2:D:212:PRO:HD2	1.28	1.27
2:D:190:CYS:SG	2:D:218:CYS:HB3	1.80	1.22
1:B:369:ARG:HB2	1:B:655:ARG:HH12	1.07	1.19
1:A:289:GLU:O	1:A:290:GLN:O	1.55	1.19
1:A:660:TYR:OH	1:A:708:GLN:OE1	1.58	1.19
1:B:750:THR:O	1:B:750:THR:CG2	1.79	1.19
2:D:170:PHE:O	2:D:193:SER:HB3	1.40	1.19
1:A:16:ASN:ND2	1:A:35:LYS:O	1.74	1.19
2:C:35:THR:HG22	2:C:36:SER:O	1.38	1.18
1:B:742:VAL:CG2	1:B:750:THR:CG2	2.21	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:367:LEU:HD13	1:B:374:GLN:OE1	1.02	1.18
1:B:367:LEU:CD1	1:B:374:GLN:CD	2.12	1.18
1:B:367:LEU:CD2	1:B:374:GLN:HG3	1.72	1.17
1:B:367:LEU:O	1:B:368:GLU:CG	1.90	1.17
1:B:474:ALA:HB3	1:B:477:ARG:HH22	1.08	1.14
1:B:432:GLN:OE1	1:B:454:ASP:HB3	0.97	1.12
1:B:889:ARG:HD3	1:B:904:ASN:HD21	0.98	1.10
1:B:742:VAL:HG23	1:B:750:THR:HG21	1.18	1.08
1:B:367:LEU:HD21	1:B:374:GLN:HG3	1.18	1.08
1:B:456:GLN:NE2	1:B:473:SER:OG	1.86	1.07
1:A:81:THR:HG22	1:A:83:LYS:H	1.19	1.07
1:B:286:GLU:HB2	1:B:299:ASP:H	1.17	1.07
2:C:52:THR:O	2:C:52:THR:HG22	1.52	1.07
1:B:368:GLU:OE1	1:B:391:ARG:NH2	1.88	1.06
1:B:367:LEU:HD11	1:B:374:GLN:HG3	1.37	1.06
2:D:111:THR:O	2:D:188:GLU:OE2	1.74	1.05
1:B:456:GLN:NE2	1:B:473:SER:CB	2.20	1.05
1:B:742:VAL:HG23	1:B:750:THR:CG2	1.83	1.05
1:A:371:GLY:HA3	1:A:1016:ASN:HD21	1.13	1.05
1:A:889:ARG:HD3	1:A:904:ASN:HD21	1.16	1.04
1:B:367:LEU:CD1	1:B:374:GLN:HG3	1.86	1.04
1:B:367:LEU:CD1	1:B:374:GLN:CG	2.35	1.03
1:B:81:THR:HG22	1:B:83:LYS:H	1.22	1.03
1:B:367:LEU:HD22	1:B:374:GLN:HB2	1.40	1.03
1:B:367:LEU:HD11	1:B:374:GLN:CG	1.89	1.03
1:A:167:VAL:HG13	1:A:180:PHE:HB3	1.38	1.02
1:B:449:MET:HE2	1:B:449:MET:HA	1.42	1.01
1:B:450:GLY:HA3	1:B:479:VAL:HG11	1.42	1.01
1:B:367:LEU:HD12	1:B:368:GLU:HG2	1.44	1.00
1:B:368:GLU:CD	1:B:391:ARG:NH2	2.20	0.99
1:B:267:ASN:HD21	1:B:269:SER:HB2	1.26	0.98
1:A:23:PHE:H	1:A:30:ASN:HD22	1.00	0.98
1:B:482:GLU:HB2	1:B:483:PRO:HD3	1.43	0.98
2:C:112:GLN:HE22	2:C:187:THR:HG23	1.28	0.98
1:B:1105:MET:HE3	1:B:1126:ALA:HB1	1.43	0.98
2:D:143:ARG:HB3	2:D:143:ARG:CZ	1.89	0.98
2:C:52:THR:HG21	2:C:85:ILE:HG12	1.43	0.97
1:B:178:ILE:HG22	1:B:193:TYR:O	1.65	0.97
1:B:167:VAL:HG12	1:B:180:PHE:HB3	1.47	0.97
1:B:288:GLU:HB2	1:B:298:LYS:HB2	1.45	0.97
1:A:706:GLU:O	1:A:707:ILE:HG13	1.63	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:ASN:HD21	1:A:507:GLN:HE21	1.02	0.96
1:B:23:PHE:H	1:B:30:ASN:HD22	1.03	0.96
1:B:889:ARG:HD3	1:B:904:ASN:ND2	1.81	0.96
1:B:191:LYS:HG2	1:B:192:THR:H	1.30	0.96
1:A:356:LEU:HD21	1:A:712:ILE:HD13	1.48	0.95
1:B:367:LEU:CG	1:B:374:GLN:HG3	1.97	0.95
1:B:294:THR:HG22	1:B:295:VAL:H	1.30	0.94
1:B:24:THR:H	1:B:30:ASN:HD21	1.12	0.94
1:B:368:GLU:OE2	1:B:391:ARG:NH2	2.01	0.93
1:A:889:ARG:HD3	1:A:904:ASN:ND2	1.83	0.93
2:D:171:HIS:NE2	2:D:212:PRO:HG2	1.84	0.93
1:B:478:LEU:HD23	1:B:479:VAL:H	1.31	0.92
2:C:190:CYS:HB2	2:C:218:CYS:SG	2.09	0.92
2:C:208:CYS:SG	2:C:210:GLN:HG2	2.09	0.92
1:B:456:GLN:CD	1:B:473:SER:HB3	1.94	0.92
1:B:976:VAL:HG22	1:B:996:GLY:HA3	1.50	0.92
1:B:286:GLU:HG3	1:B:299:ASP:HB3	1.52	0.91
1:B:474:ALA:HB3	1:B:477:ARG:NH2	1.85	0.91
1:B:480:SER:HB3	1:B:485:ALA:H	1.36	0.91
2:C:194:CYS:SG	2:C:208:CYS:N	2.42	0.91
1:B:450:GLY:O	1:B:479:VAL:HG21	1.70	0.91
2:D:108:THR:O	2:D:110:SER:N	2.04	0.91
2:D:80:ARG:HB2	2:D:81:PRO:HD3	1.51	0.90
1:A:660:TYR:HH	1:A:708:GLN:CD	1.79	0.90
2:C:52:THR:CG2	2:C:85:ILE:HG23	2.01	0.90
1:B:162:LEU:HD23	1:B:162:LEU:H	1.35	0.90
1:B:1125:THR:HG22	1:B:1127:ASP:H	1.34	0.90
1:B:742:VAL:O	1:B:750:THR:HB	1.71	0.90
1:B:478:LEU:HD23	1:B:479:VAL:N	1.87	0.90
1:B:225:PRO:HG2	1:B:267:ASN:HB2	1.53	0.89
1:B:450:GLY:HA3	1:B:479:VAL:CG1	2.01	0.89
1:A:422:TYR:HD1	1:A:683:ASN:H	1.11	0.89
1:B:1032:THR:HG22	1:B:1034:ASN:H	1.35	0.89
1:B:256:SER:HB2	1:B:276:MET:HB3	1.53	0.89
2:C:109:PRO:HG2	2:C:203:ARG:CZ	2.02	0.89
2:D:190:CYS:SG	2:D:218:CYS:CB	2.47	0.89
1:A:889:ARG:HH11	1:A:904:ASN:ND2	1.69	0.88
1:B:432:GLN:CD	1:B:454:ASP:HB3	1.98	0.88
1:B:594:THR:HG22	1:B:595:THR:H	1.36	0.88
2:C:52:THR:HG21	2:C:85:ILE:HG23	1.54	0.88
1:B:453:ASP:OD2	1:B:472:THR:HG21	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:24:THR:H	1:B:30:ASN:ND2	1.70	0.88
1:A:253:ILE:HD12	1:A:258:ILE:HD11	1.55	0.87
2:D:169:GLY:O	2:D:212:PRO:HD3	1.71	0.87
1:B:451:PHE:C	1:B:451:PHE:CD2	2.52	0.87
1:B:570:LYS:HG3	1:B:572:PRO:HD2	1.56	0.87
2:C:52:THR:O	2:C:54:ALA:N	2.07	0.87
1:B:178:ILE:CG2	1:B:193:TYR:O	2.22	0.87
1:B:232:ILE:HG21	1:B:258:ILE:HD12	1.56	0.87
1:B:746:SER:OG	1:B:746:SER:O	1.78	0.87
2:C:52:THR:HG21	2:C:85:ILE:CG1	2.05	0.87
1:A:699:LEU:HD13	1:A:700:THR:N	1.90	0.86
1:A:396:ILE:HD13	1:A:396:ILE:H	1.38	0.86
1:B:507:GLN:HE22	1:B:553:SER:H	1.22	0.86
1:B:430:VAL:HG13	1:B:456:GLN:HB3	1.55	0.86
1:B:367:LEU:C	1:B:368:GLU:HG2	2.01	0.86
1:B:790:ASN:HB3	1:B:806:GLN:HA	1.59	0.85
1:B:404:LEU:O	1:B:407:ILE:HD11	1.75	0.85
2:C:194:CYS:SG	2:C:207:THR:N	2.49	0.85
2:D:171:HIS:HB2	2:D:215:CYS:CB	2.06	0.85
1:B:367:LEU:HD22	1:B:374:GLN:CG	2.07	0.85
1:B:436:LEU:HD12	1:B:445:GLU:HB3	1.59	0.85
1:B:869:ALA:O	1:B:884:ILE:O	1.94	0.85
1:B:433:THR:HG21	1:B:457:THR:OG1	1.76	0.85
1:B:329:GLY:HA3	1:B:384:GLU:HG2	1.59	0.84
1:B:369:ARG:HB2	1:B:655:ARG:NH1	1.92	0.84
1:B:994:GLU:O	1:B:995:VAL:HG22	1.78	0.84
1:A:743:GLN:HA	1:A:749:THR:HG22	1.59	0.84
1:A:23:PHE:H	1:A:30:ASN:ND2	1.74	0.83
1:A:553:SER:O	1:A:571:LEU:HD12	1.79	0.83
1:B:742:VAL:HG21	1:B:750:THR:HG21	1.60	0.83
2:C:51:LEU:HD22	2:C:142:THR:H	1.43	0.83
1:B:742:VAL:HG22	1:B:750:THR:CG2	2.09	0.83
1:A:24:THR:H	1:A:30:ASN:HD21	1.25	0.83
1:A:417:PRO:HG3	1:A:481:GLN:HB3	1.61	0.82
1:B:731:GLN:HA	1:B:796:GLN:NE2	1.94	0.82
1:B:756:ALA:HB1	1:B:801:VAL:HG21	1.61	0.82
1:A:186:GLN:H	1:A:186:GLN:HE21	1.28	0.82
1:B:255:GLN:H	1:B:255:GLN:HE21	1.28	0.82
1:B:10:GLN:HB3	1:B:1037:ILE:HB	1.61	0.82
2:C:168:GLY:HA2	2:C:193:SER:HB2	1.61	0.82
1:A:780:THR:O	1:A:781:SER:O	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1032:THR:HG23	1:A:1034:ASN:H	1.44	0.81
1:B:981:SER:HA	1:B:989:ARG:HG3	1.63	0.81
1:B:367:LEU:O	1:B:367:LEU:HD12	1.80	0.81
1:B:437:MET:HB3	1:B:444:GLU:O	1.80	0.81
2:D:114:VAL:HG22	2:D:185:LYS:HD3	1.62	0.81
1:B:803:HIS:HD2	1:B:804:ALA:H	1.29	0.81
2:C:190:CYS:CB	2:C:218:CYS:SG	2.69	0.81
1:B:290:GLN:HE21	1:B:293:GLY:HA3	1.43	0.80
2:D:88:ALA:HA	2:D:199:ALA:HB3	1.61	0.80
1:A:81:THR:HG22	1:A:83:LYS:N	1.96	0.80
1:B:25:SER:O	1:B:74:LYS:HB3	1.82	0.80
1:B:297:LEU:HD21	1:B:300:LEU:HD11	1.63	0.80
1:A:705:ASP:OD2	1:A:709:LYS:HE2	1.82	0.80
1:B:476:VAL:HG13	1:B:490:TRP:HB3	1.64	0.80
2:C:112:GLN:NE2	2:C:187:THR:HG23	1.96	0.80
1:B:1101:SER:OG	1:B:1103:PRO:HD2	1.80	0.80
2:D:192:PRO:O	2:D:194:CYS:N	2.15	0.80
1:B:275:ASP:HB2	1:B:279:ARG:H	1.45	0.79
1:B:466:GLN:O	1:B:481:GLN:HB2	1.82	0.79
1:A:146:ASP:C	1:A:148:ASP:H	1.89	0.79
1:B:139:LEU:HB3	1:B:156:ASN:HD22	1.45	0.79
1:B:750:THR:O	1:B:750:THR:HG22	1.01	0.79
2:D:116:ASP:O	2:D:182:ASP:HB3	1.83	0.78
1:A:454:ASP:O	1:A:455:GLN:HG2	1.83	0.78
1:A:889:ARG:HH11	1:A:904:ASN:HD21	1.27	0.78
1:A:416:ASP:HB3	1:A:419:ARG:HG3	1.66	0.78
1:B:894:THR:HG22	1:B:896:GLU:H	1.49	0.78
1:A:112:ILE:HD13	1:A:112:ILE:H	1.46	0.78
1:B:419:ARG:HH11	1:B:423:ASP:HB3	1.48	0.78
1:B:47:GLU:HG2	1:B:48:GLY:H	1.48	0.78
1:A:186:GLN:H	1:A:186:GLN:NE2	1.81	0.78
1:A:24:THR:H	1:A:30:ASN:ND2	1.81	0.77
1:B:432:GLN:OE1	1:B:454:ASP:CA	2.32	0.77
1:A:429:PHE:O	1:A:456:GLN:HG3	1.84	0.77
1:A:706:GLU:O	1:A:707:ILE:CG1	2.31	0.77
1:B:57:MET:HE3	1:B:1066:GLY:H	1.49	0.77
1:B:367:LEU:CD2	1:B:374:GLN:CD	2.56	0.77
1:A:143:ILE:HG12	1:A:154:ALA:HB2	1.66	0.77
1:A:440:GLY:O	1:A:686:GLY:HA3	1.82	0.77
2:C:52:THR:O	2:C:52:THR:CG2	2.24	0.77
2:C:52:THR:HG21	2:C:85:ILE:CG2	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:68:ARG:HD3	1:A:75:ASP:OD2	1.84	0.77
1:A:504:ASN:HD21	1:A:507:GLN:NE2	1.81	0.77
1:A:262:ASN:ND2	1:A:316:TYR:H	1.81	0.77
2:D:170:PHE:C	2:D:193:SER:HB3	2.09	0.77
1:A:504:ASN:ND2	1:A:507:GLN:HE21	1.81	0.77
2:C:50:LEU:HD21	2:C:197:ILE:HG13	1.65	0.77
1:A:867:LYS:HE2	1:A:889:ARG:HH22	1.48	0.77
1:B:81:THR:HB	1:B:85:ASN:H	1.50	0.77
2:C:208:CYS:SG	2:C:211:CYS:N	2.58	0.77
1:A:909:ILE:HG12	1:A:928:ARG:HD2	1.67	0.76
1:B:255:GLN:H	1:B:255:GLN:NE2	1.82	0.76
2:D:15:LYS:HD2	2:D:41:ASN:ND2	1.99	0.76
1:A:589:ARG:HG3	1:A:635:PRO:HB2	1.67	0.76
1:B:23:PHE:N	1:B:30:ASN:HD22	1.82	0.76
1:B:450:GLY:CA	1:B:479:VAL:CG1	2.64	0.76
2:D:15:LYS:HD2	2:D:41:ASN:HD22	1.48	0.76
1:A:901:THR:HG22	1:A:902:GLU:O	1.85	0.76
1:B:367:LEU:HD22	1:B:374:GLN:CB	1.98	0.76
1:A:234:GLN:HE22	1:A:257:THR:HA	1.51	0.76
1:A:273:LEU:HB2	1:A:281:PHE:HB2	1.67	0.76
2:D:170:PHE:O	2:D:193:SER:CB	2.30	0.76
1:A:415:SER:HB3	1:A:423:ASP:OD1	1.86	0.76
1:B:367:LEU:HD22	1:B:374:GLN:CD	2.10	0.76
1:B:466:GLN:H	1:B:466:GLN:HE21	1.34	0.76
1:B:492:GLU:HG3	1:B:512:VAL:HG11	1.68	0.76
1:B:286:GLU:HB2	1:B:299:ASP:N	1.96	0.76
1:A:910:MET:CE	1:A:912:LEU:HD21	2.16	0.76
1:B:396:ILE:HD11	1:B:673:LEU:HD11	1.66	0.75
1:B:478:LEU:HB2	1:B:526:LEU:HD21	1.68	0.75
2:D:122:LEU:HD12	2:D:122:LEU:H	1.50	0.75
1:A:371:GLY:HA3	1:A:1016:ASN:ND2	1.95	0.75
1:B:742:VAL:HG22	1:B:750:THR:HG22	1.66	0.75
1:B:405:PRO:HA	1:B:697:SER:HA	1.68	0.75
1:A:184:ASP:HB2	1:A:185:PRO:CD	2.15	0.75
2:D:82:LYS:C	2:D:83:ILE:HD12	2.12	0.75
2:D:98:ILE:HB	2:D:201:ALA:HB1	1.68	0.75
1:B:191:LYS:HG2	1:B:192:THR:N	2.02	0.75
1:A:16:ASN:HD22	1:A:35:LYS:C	1.94	0.75
1:B:594:THR:HG22	1:B:595:THR:N	2.02	0.75
1:A:910:MET:HE3	1:A:912:LEU:HD21	1.69	0.74
1:B:803:HIS:CD2	1:B:804:ALA:H	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:50:LEU:O	2:D:52:THR:HG23	1.86	0.74
1:A:289:GLU:C	1:A:290:GLN:O	2.30	0.74
1:B:235:GLU:H	1:B:253:ILE:HG22	1.52	0.74
1:B:367:LEU:HD12	1:B:368:GLU:CG	2.17	0.74
1:A:342:GLU:HG2	1:A:343:GLN:HG3	1.68	0.74
1:A:798:THR:OG1	1:A:800:GLU:HG2	1.88	0.74
1:B:159:LEU:HD23	1:B:161:GLU:H	1.52	0.74
1:B:864:LYS:HE2	1:B:891:TYR:HE2	1.52	0.74
1:B:663:ASN:HB2	1:B:1134:GLU:HG3	1.69	0.74
1:A:931:LEU:HD23	1:A:932:LEU:N	2.03	0.74
1:A:1032:THR:HG22	1:A:1036:MET:H	1.53	0.74
1:B:1070:HIS:CE1	1:B:1093:LEU:HD12	2.23	0.73
2:D:208:CYS:O	2:D:210:GLN:N	2.21	0.73
1:A:750:THR:HG22	1:A:751:ALA:H	1.52	0.73
1:A:903:CYS:SG	1:A:941:ASN:HA	2.28	0.73
1:A:282:MET:HG2	1:A:305:LEU:HD11	1.69	0.73
1:A:642:ARG:HG2	1:A:647:THR:HB	1.69	0.73
1:B:368:GLU:OE2	1:B:391:ARG:CZ	2.36	0.73
1:A:855:ASP:O	1:A:857:LYS:N	2.21	0.73
1:B:314:LEU:O	1:B:314:LEU:HD12	1.88	0.73
1:A:803:HIS:CD2	1:A:858:LEU:HB2	2.24	0.73
1:B:267:ASN:ND2	1:B:269:SER:HB2	2.03	0.73
2:D:108:THR:HB	2:D:109:PRO:HD3	1.71	0.73
1:B:407:ILE:HD12	1:B:407:ILE:H	1.52	0.73
2:D:102:LEU:HD11	2:D:180:VAL:HG22	1.70	0.73
1:A:936:LYS:HE2	1:A:943:GLU:OE2	1.89	0.72
1:A:873:MET:HE2	1:A:880:LEU:HD11	1.72	0.72
1:B:707:ILE:CG2	1:B:709:LYS:HE3	2.20	0.72
1:B:450:GLY:CA	1:B:479:VAL:HG13	2.19	0.72
1:B:368:GLU:OE2	1:B:374:GLN:OE1	2.07	0.72
2:C:109:PRO:HG2	2:C:203:ARG:NH2	2.03	0.72
1:B:597:GLU:HG2	1:B:664:HIS:CE1	2.24	0.72
2:C:52:THR:HG21	2:C:85:ILE:CB	2.19	0.72
1:B:129:ARG:NH1	1:B:176:PRO:HD3	2.04	0.72
1:B:130:MET:HE2	1:B:142:VAL:HG13	1.71	0.71
2:D:19:THR:HG22	2:D:20:GLY:H	1.55	0.71
1:A:59:GLY:HA2	1:A:1073:TRP:CZ3	2.25	0.71
1:A:564:ILE:HG22	1:A:582:LEU:HD12	1.72	0.71
1:A:839:GLU:CD	1:A:839:GLU:H	1.99	0.71
1:B:141:LYS:HD2	1:B:156:ASN:OD1	1.90	0.71
1:B:147:ARG:HE	1:B:147:ARG:HA	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:451:PHE:CD2	1:B:451:PHE:O	2.43	0.71
1:B:504:ASN:HD21	1:B:507:GLN:HB2	1.55	0.71
2:C:30:GLN:HE21	2:C:36:SER:HA	1.54	0.71
1:B:634:GLN:HB3	1:B:635:PRO:HD2	1.72	0.71
1:B:246:LEU:HD13	1:B:300:LEU:HD13	1.71	0.71
1:A:867:LYS:CE	1:A:889:ARG:HH22	2.04	0.71
1:B:355:ASN:C	1:B:357:GLY:H	1.96	0.71
1:B:23:PHE:H	1:B:30:ASN:ND2	1.83	0.71
1:B:456:GLN:HE22	1:B:473:SER:CB	2.04	0.71
1:A:648:ASN:HD22	1:A:660:TYR:HB3	1.56	0.71
2:C:50:LEU:HD21	2:C:197:ILE:CG1	2.21	0.70
1:A:750:THR:HG22	1:A:751:ALA:N	2.06	0.70
1:B:124:ILE:HG23	1:B:131:ILE:HD13	1.71	0.70
1:B:731:GLN:HA	1:B:796:GLN:HE21	1.56	0.70
1:A:1032:THR:HG21	1:A:1036:MET:HB3	1.71	0.70
1:B:643:SER:HB3	1:B:706:GLU:HG3	1.73	0.70
1:B:690:SER:C	1:B:691:LEU:HD12	2.15	0.70
1:A:291:MET:HG3	1:A:292:ASP:H	1.57	0.70
1:A:879:LYS:HE2	1:A:902:GLU:OE2	1.91	0.70
1:B:275:ASP:CG	1:B:279:ARG:HB2	2.16	0.70
2:C:52:THR:CG2	2:C:85:ILE:HG12	2.20	0.70
1:B:656:PRO:HB2	1:B:671:VAL:HB	1.74	0.70
1:B:665:LYS:HD3	1:B:1138:ARG:NH1	2.07	0.70
2:C:108:THR:O	2:C:110:SER:N	2.24	0.70
2:C:164:GLY:O	2:C:194:CYS:HA	1.91	0.70
2:D:99:PRO:HG2	2:D:106:ASP:HA	1.73	0.70
1:B:196:SER:OG	1:B:199:GLU:HG2	1.92	0.70
1:A:611:LEU:C	1:A:611:LEU:HD23	2.17	0.69
1:B:63:VAL:HB	1:B:80:LEU:HB3	1.72	0.69
2:D:171:HIS:CD2	2:D:212:PRO:HG2	2.25	0.69
1:A:369:ARG:O	1:A:370:GLN:HB3	1.92	0.69
1:B:419:ARG:NH1	1:B:423:ASP:HB3	2.05	0.69
1:B:1036:MET:O	1:B:1037:ILE:HB	1.92	0.69
2:C:215:CYS:SG	2:C:218:CYS:N	2.64	0.69
1:A:1022:THR:HG22	1:A:1024:THR:H	1.58	0.69
2:C:52:THR:CB	2:C:85:ILE:HA	2.21	0.69
1:A:298:LYS:HD3	1:A:299:ASP:HB2	1.74	0.69
1:A:480:SER:HB3	1:A:487:VAL:HG11	1.74	0.69
1:B:107:ASN:OD1	1:B:109:GLN:HG2	1.91	0.69
1:B:482:GLU:CB	1:B:483:PRO:HD3	2.18	0.69
1:A:253:ILE:O	1:A:255:GLN:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:482:GLU:HB2	1:A:483:PRO:HD3	1.75	0.69
1:A:507:GLN:NE2	1:A:553:SER:H	1.90	0.69
1:B:130:MET:HG2	1:B:197:LEU:HD21	1.73	0.69
1:B:369:ARG:HH12	1:B:670:ASN:HB3	1.58	0.69
1:B:456:GLN:OE1	1:B:473:SER:HB3	1.93	0.69
1:B:480:SER:HB3	1:B:485:ALA:N	2.08	0.69
2:C:108:THR:O	2:C:222:THR:HA	1.93	0.69
1:B:1026:GLY:O	1:B:1041:THR:HG22	1.92	0.69
2:C:145:ILE:HD11	2:C:174:GLU:CD	2.18	0.69
1:A:312:GLU:HG3	1:A:327:ARG:HB2	1.74	0.68
1:B:464:ALA:O	1:B:465:HIS:ND1	2.27	0.68
1:B:736:LEU:HD13	1:B:813:ALA:HB1	1.75	0.68
1:A:81:THR:CG2	1:A:83:LYS:H	2.02	0.68
1:B:367:LEU:HD21	1:B:374:GLN:CA	2.23	0.68
1:B:449:MET:HA	1:B:449:MET:CE	2.21	0.68
2:C:86:VAL:CG1	2:C:198:THR:HA	2.23	0.68
1:A:844:LYS:HG3	1:A:845:GLN:HG3	1.76	0.68
1:B:910:MET:HB2	1:B:926:LEU:HB3	1.75	0.68
1:B:474:ALA:CB	1:B:477:ARG:HH22	1.96	0.68
1:A:372:GLN:HB3	1:A:1014:MET:SD	2.34	0.68
1:B:167:VAL:O	1:B:168:LYS:HB2	1.92	0.68
1:A:977:CYS:HB3	1:A:992:LEU:HD13	1.75	0.68
1:B:582:LEU:HD12	1:B:582:LEU:O	1.93	0.68
2:C:161:PHE:CE1	2:C:163:ARG:HB2	2.29	0.67
1:B:402:ILE:HD12	1:B:402:ILE:N	2.10	0.67
2:D:163:ARG:H	2:D:163:ARG:HD2	1.58	0.67
1:B:112:ILE:HG22	1:B:113:GLY:H	1.58	0.67
1:B:450:GLY:HA2	1:B:479:VAL:HG13	1.75	0.67
1:B:475:SER:HA	1:B:498:ILE:HD11	1.74	0.67
1:A:706:GLU:C	1:A:707:ILE:HG13	2.19	0.67
1:A:929:SER:HB3	1:A:952:ASN:HB2	1.76	0.67
2:C:38:LEU:O	2:C:40:LYS:N	2.27	0.67
1:A:992:LEU:HD12	1:A:992:LEU:O	1.94	0.67
2:C:161:PHE:HE1	2:C:163:ARG:HB2	1.60	0.67
1:A:663:ASN:O	1:A:664:HIS:HB2	1.95	0.67
1:B:514:ARG:O	1:B:514:ARG:HG2	1.94	0.67
2:C:88:ALA:HA	2:C:199:ALA:HB3	1.76	0.67
2:D:171:HIS:HB2	2:D:215:CYS:HB2	1.76	0.67
1:B:704:ILE:HD13	1:B:704:ILE:H	1.60	0.66
1:B:80:LEU:HD22	1:B:133:LEU:HD23	1.76	0.66
2:D:51:LEU:HD12	2:D:142:THR:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:208:CYS:C	2:D:210:GLN:H	2.03	0.66
1:A:207:TRP:HB3	1:A:242:GLY:HA2	1.77	0.66
1:A:275:ASP:HB3	1:A:279:ARG:H	1.60	0.66
1:A:1128:ASP:O	1:A:1132:VAL:HG23	1.94	0.66
1:A:388:ARG:HD3	1:A:714:THR:HB	1.76	0.66
1:A:416:ASP:HB3	1:A:419:ARG:CG	2.25	0.66
1:A:23:PHE:N	1:A:30:ASN:HD22	1.84	0.66
1:B:1017:LEU:HD12	1:B:1019:GLU:OE2	1.96	0.66
1:B:232:ILE:CG2	1:B:258:ILE:HD12	2.25	0.66
2:D:113:THR:HB	2:D:186:VAL:HB	1.78	0.66
1:B:270:ARG:HG2	1:B:284:LEU:HD23	1.78	0.66
1:B:743:GLN:HE21	1:B:782:PHE:HA	1.60	0.66
2:D:168:GLY:CA	2:D:208:CYS:SG	2.84	0.66
1:A:57:MET:HE3	1:A:1065:VAL:HG12	1.78	0.66
1:B:973:ASN:HD21	1:B:1077:HIS:H	1.42	0.66
1:B:1112:LEU:HD23	1:B:1113:GLN:N	2.11	0.66
2:D:111:THR:C	2:D:188:GLU:OE2	2.38	0.66
1:A:207:TRP:CB	1:A:242:GLY:HA2	2.27	0.65
1:B:742:VAL:HG23	1:B:750:THR:CB	2.25	0.65
1:B:695:ASN:HB2	1:B:698:THR:HG22	1.77	0.65
1:B:707:ILE:HG23	1:B:709:LYS:HE3	1.78	0.65
1:A:648:ASN:HD22	1:A:660:TYR:CB	2.09	0.65
2:C:160:ASP:CG	2:C:161:PHE:H	2.04	0.65
1:A:396:ILE:H	1:A:396:ILE:CD1	2.09	0.65
1:B:465:HIS:CE1	1:B:523:PRO:HD3	2.32	0.65
2:D:163:ARG:HD2	2:D:197:ILE:HD11	1.78	0.65
1:B:1032:THR:HG22	1:B:1033:VAL:N	2.10	0.65
1:A:1085:ALA:O	1:A:1086:THR:HG23	1.96	0.65
1:A:1113:GLN:HB3	1:A:1121:LYS:HD2	1.78	0.65
1:B:432:GLN:OE1	1:B:454:ASP:C	2.39	0.65
2:D:49:GLY:HA3	2:D:83:ILE:HG13	1.79	0.65
2:D:168:GLY:HA2	2:D:208:CYS:SG	2.37	0.65
2:D:171:HIS:HB2	2:D:215:CYS:HB3	1.79	0.65
1:A:10:GLN:HB2	1:A:1037:ILE:HB	1.78	0.65
1:A:699:LEU:HD13	1:A:700:THR:H	1.58	0.64
1:B:112:ILE:N	1:B:112:ILE:HD12	2.12	0.64
1:B:365:VAL:O	1:B:367:LEU:HD23	1.98	0.64
2:D:163:ARG:CD	2:D:197:ILE:HD11	2.26	0.64
1:B:294:THR:HG22	1:B:295:VAL:N	2.05	0.64
1:B:385:GLY:HA3	1:B:719:GLU:O	1.97	0.64
1:B:894:THR:HG22	1:B:895:THR:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:564:ILE:HG22	1:A:564:ILE:O	1.97	0.64
1:B:16:ASN:ND2	1:B:35:LYS:O	2.23	0.64
1:B:427:LEU:HD13	1:B:429:PHE:HE1	1.62	0.64
1:B:1058:LEU:HD23	1:B:1093:LEU:HD22	1.80	0.64
1:B:407:ILE:HD12	1:B:407:ILE:N	2.11	0.64
1:B:451:PHE:C	1:B:451:PHE:HD2	2.05	0.64
1:A:368:GLU:HB3	1:A:370:GLN:HE22	1.62	0.64
1:A:275:ASP:HB2	1:A:279:ARG:HB2	1.79	0.64
1:B:208:LYS:HG3	1:B:209:GLN:H	1.62	0.64
1:B:238:THR:HA	1:B:247:ALA:HA	1.79	0.64
2:D:46:GLY:O	2:D:146:GLU:HG3	1.97	0.64
1:A:492:GLU:CD	1:A:494:GLN:H	2.05	0.64
1:B:432:GLN:OE1	1:B:454:ASP:O	2.16	0.64
1:B:451:PHE:O	1:B:451:PHE:HD2	1.81	0.64
1:B:317:LEU:O	1:B:318:ASP:HB2	1.96	0.64
1:B:419:ARG:HD3	1:B:421:THR:O	1.97	0.64
2:D:192:PRO:C	2:D:194:CYS:H	2.05	0.64
2:D:170:PHE:N	2:D:170:PHE:CD1	2.66	0.64
1:A:1051:LEU:HD22	1:A:1094:ILE:HG12	1.79	0.63
1:B:19:VAL:HG22	1:B:20:THR:H	1.63	0.63
1:B:682:LEU:HD13	1:B:683:ASN:N	2.13	0.63
1:B:1105:MET:HE1	1:B:1130:ILE:HD11	1.81	0.63
1:A:1118:SER:C	1:A:1120:MET:H	2.07	0.63
1:B:272:LEU:HD22	1:B:280:LEU:HD11	1.80	0.63
1:B:367:LEU:HD22	1:B:374:GLN:NE2	2.13	0.63
2:D:218:CYS:HB2	2:D:221:ASP:OD1	1.98	0.63
1:A:767:SER:O	1:A:769:LYS:HE3	1.98	0.63
1:B:456:GLN:CD	1:B:473:SER:CB	2.64	0.63
1:B:218:MET:HE2	1:B:218:MET:HA	1.79	0.63
1:B:394:ILE:HD12	1:B:658:VAL:HB	1.81	0.63
1:B:1022:THR:HG22	1:B:1024:THR:OG1	1.99	0.63
1:B:1130:ILE:O	1:B:1134:GLU:HB2	1.97	0.63
1:A:298:LYS:HD3	1:A:298:LYS:C	2.24	0.63
1:B:369:ARG:HH21	1:B:372:GLN:CD	2.06	0.63
1:B:866:VAL:HG12	1:B:884:ILE:HG21	1.80	0.63
1:B:129:ARG:HD3	1:B:176:PRO:HG3	1.81	0.63
1:B:432:GLN:O	1:B:433:THR:OG1	2.17	0.63
1:B:481:GLN:NE2	1:B:484:LYS:NZ	2.47	0.63
1:B:742:VAL:CG2	1:B:750:THR:HG22	2.19	0.62
1:A:580:GLU:HG2	1:A:614:PHE:CZ	2.33	0.62
1:A:268:GLY:O	1:A:270:ARG:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:780:THR:HB	1:A:784:GLU:HB2	1.81	0.62
1:B:368:GLU:CD	1:B:391:ARG:HH21	2.06	0.62
1:B:507:GLN:NE2	1:B:553:SER:H	1.96	0.62
2:D:128:LYS:HE2	2:D:146:GLU:OE1	2.00	0.62
1:B:513:GLY:O	1:B:514:ARG:HB3	1.99	0.62
1:B:926:LEU:HG	1:B:927:MET:HG3	1.81	0.62
2:D:102:LEU:HD23	2:D:102:LEU:O	1.99	0.62
1:A:986:ASP:HB2	1:B:1118:SER:HB3	1.81	0.62
1:A:1114:TYR:HB2	1:A:1124:ALA:HB2	1.82	0.62
1:B:803:HIS:CD2	1:B:804:ALA:N	2.67	0.62
1:B:1065:VAL:C	1:B:1067:LYS:H	2.07	0.62
1:B:1051:LEU:HA	1:B:1054:MET:HB2	1.80	0.62
1:B:414:ARG:HB2	1:B:462:ASN:ND2	2.13	0.62
1:B:456:GLN:NE2	1:B:473:SER:HB3	2.00	0.62
1:B:1102:ARG:HD2	1:B:1105:MET:HE2	1.81	0.62
2:C:164:GLY:HA2	2:C:194:CYS:O	2.00	0.62
2:D:173:ARG:NH1	2:D:218:CYS:HB3	2.14	0.62
1:A:414:ARG:HG2	1:A:414:ARG:HH11	1.64	0.61
1:B:739:ARG:NH1	1:B:758:THR:HG23	2.15	0.61
1:B:918:GLY:O	1:B:919:ASP:HB2	1.99	0.61
1:B:474:ALA:O	1:B:475:SER:HB3	2.00	0.61
1:B:629:VAL:HA	1:B:1017:LEU:O	1.99	0.61
1:B:769:LYS:H	1:B:769:LYS:HD2	1.65	0.61
2:D:47:VAL:HG12	2:D:48:THR:N	2.15	0.61
1:B:386:SER:HA	1:B:717:LEU:HG	1.81	0.61
1:B:440:GLY:O	1:B:686:GLY:HA3	2.00	0.61
1:A:986:ASP:H	1:B:1118:SER:HB3	1.65	0.61
1:B:14:ALA:HB1	1:B:327:ARG:HG3	1.82	0.61
1:B:414:ARG:HB2	1:B:462:ASN:HD21	1.64	0.61
2:C:52:THR:HG22	2:C:85:ILE:HG23	1.82	0.61
1:A:16:ASN:ND2	1:A:35:LYS:C	2.56	0.61
1:A:679:MET:HE2	1:A:691:LEU:HG	1.81	0.61
2:C:119:GLY:O	2:C:120:LYS:HB2	1.99	0.61
1:A:234:GLN:NE2	1:A:257:THR:HA	2.14	0.61
1:A:358:PRO:O	1:A:379:SER:HA	2.01	0.61
1:B:286:GLU:O	1:B:297:LEU:HD12	2.00	0.61
1:B:644:LEU:HD23	1:B:644:LEU:H	1.66	0.61
1:B:740:ILE:N	1:B:740:ILE:HD12	2.16	0.61
1:A:146:ASP:C	1:A:148:ASP:N	2.56	0.60
1:A:564:ILE:HG22	1:A:582:LEU:CD1	2.29	0.60
1:A:722:ARG:HG3	1:A:722:ARG:HH11	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:679:MET:HE3	1:B:691:LEU:HD23	1.82	0.60
1:B:1013:VAL:O	1:B:1014:MET:HB3	2.01	0.60
1:A:184:ASP:HB2	1:A:185:PRO:HD2	1.83	0.60
1:A:889:ARG:HD2	1:A:901:THR:HG23	1.84	0.60
1:B:594:THR:CG2	1:B:595:THR:H	2.12	0.60
1:B:43:VAL:HG23	1:B:52:VAL:HG11	1.83	0.60
1:B:232:ILE:HG12	1:B:237:ILE:HG23	1.82	0.60
1:B:693:LEU:N	1:B:693:LEU:HD23	2.16	0.60
1:B:994:GLU:HG3	1:B:995:VAL:H	1.66	0.60
1:A:564:ILE:N	1:A:564:ILE:HD12	2.16	0.60
1:A:660:TYR:CZ	1:A:708:GLN:OE1	2.50	0.60
1:B:162:LEU:H	1:B:162:LEU:CD2	2.10	0.60
1:B:367:LEU:HD21	1:B:374:GLN:N	2.16	0.60
1:B:498:ILE:CG2	1:B:512:VAL:HG22	2.31	0.60
2:C:180:VAL:HG12	2:C:180:VAL:O	2.02	0.60
1:B:570:LYS:HG2	1:B:575:GLU:OE1	2.02	0.60
1:A:848:ILE:HD11	1:A:870:VAL:HG11	1.83	0.60
1:B:1118:SER:O	1:B:1120:MET:HG3	2.02	0.60
2:D:147:GLU:O	2:D:149:ARG:N	2.34	0.60
1:A:543:ILE:O	1:A:543:ILE:HG13	2.02	0.60
1:A:161:GLU:CD	1:A:161:GLU:H	2.09	0.59
1:B:356:LEU:HD23	1:B:388:ARG:HG3	1.83	0.59
1:B:985:THR:O	1:B:989:ARG:HB3	2.02	0.59
1:B:1108:VAL:O	1:B:1109:VAL:HB	2.02	0.59
1:A:160:GLU:HB3	1:A:161:GLU:OE2	2.02	0.59
1:A:300:LEU:N	1:A:300:LEU:HD23	2.17	0.59
1:B:5:TYR:CE2	1:B:7:VAL:CG2	2.85	0.59
2:D:143:ARG:HA	2:D:175:TYR:O	2.01	0.59
1:B:167:VAL:HG12	1:B:180:PHE:CB	2.26	0.59
1:A:589:ARG:HG2	1:A:589:ARG:HH11	1.66	0.59
1:A:867:LYS:CD	1:A:867:LYS:H	2.15	0.59
1:A:931:LEU:HD23	1:A:931:LEU:C	2.27	0.59
2:D:174:GLU:O	2:D:188:GLU:HA	2.03	0.59
1:B:472:THR:OG1	1:B:477:ARG:NH2	2.33	0.59
1:A:743:GLN:HB3	1:A:782:PHE:O	2.03	0.59
1:B:1022:THR:C	1:B:1024:THR:H	2.09	0.59
2:D:22:ASN:O	2:D:24:VAL:N	2.36	0.59
2:D:112:GLN:HE22	2:D:187:THR:HG23	1.67	0.59
1:A:20:THR:HB	1:A:315:THR:HG21	1.84	0.59
1:B:449:MET:O	1:B:451:PHE:N	2.35	0.59
1:B:1032:THR:CG2	1:B:1033:VAL:N	2.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:208:CYS:SG	2:C:210:GLN:CG	2.88	0.59
1:A:36:ASN:OD1	1:A:60:LYS:HD2	2.02	0.59
1:A:117:GLU:C	1:A:119:GLY:H	2.10	0.59
1:A:186:GLN:NE2	1:A:186:GLN:N	2.50	0.59
1:A:532:THR:HG22	1:A:533:GLU:N	2.17	0.59
1:B:192:THR:OG1	1:B:205:GLY:HA3	2.02	0.59
1:B:1050:LEU:C	1:B:1050:LEU:HD23	2.28	0.59
1:B:1062:ILE:HD13	1:B:1100:ILE:HD11	1.85	0.59
1:A:1070:HIS:CE1	1:A:1093:LEU:HD12	2.38	0.59
1:A:188:ARG:NH1	1:A:216:ALA:O	2.36	0.58
1:A:507:GLN:HE22	1:A:553:SER:HB3	1.68	0.58
1:A:780:THR:HG22	1:A:781:SER:H	1.68	0.58
1:B:417:PRO:HG3	1:B:481:GLN:OE1	2.03	0.58
2:D:112:GLN:NE2	2:D:187:THR:HG23	2.18	0.58
1:A:288:GLU:HB3	1:A:296:THR:HG23	1.86	0.58
1:B:466:GLN:HE21	1:B:466:GLN:N	1.99	0.58
1:B:706:GLU:O	1:B:707:ILE:HB	2.03	0.58
1:B:795:ASP:HB3	1:B:798:THR:OG1	2.03	0.58
1:B:866:VAL:HG11	1:B:884:ILE:HD12	1.86	0.58
1:B:577:LEU:O	1:B:578:HIS:HB2	2.02	0.58
1:B:199:GLU:HG3	1:B:201:GLU:HG2	1.84	0.58
1:A:686:GLY:C	1:A:688:PRO:HD3	2.29	0.58
1:A:982:ALA:C	1:A:984:THR:H	2.11	0.58
1:B:129:ARG:HD3	1:B:176:PRO:CG	2.33	0.58
1:B:341:ASN:ND2	1:B:342:GLU:HG2	2.19	0.58
1:B:450:GLY:O	1:B:451:PHE:C	2.44	0.58
2:C:51:LEU:HD23	2:C:141:MET:HA	1.86	0.58
1:A:341:ASN:CG	1:A:342:GLU:N	2.57	0.58
1:B:53:LYS:HE3	1:B:98:ILE:HB	1.85	0.58
1:B:356:LEU:O	1:B:357:GLY:O	2.21	0.58
1:B:1014:MET:HG3	1:B:1015:GLN:N	2.17	0.58
1:B:1070:HIS:NE2	1:B:1093:LEU:HD12	2.19	0.58
1:A:1032:THR:HB	1:A:1036:MET:O	2.03	0.58
1:B:367:LEU:HD11	1:B:374:GLN:OE1	1.95	0.58
1:B:368:GLU:HG3	1:B:369:ARG:HG2	1.86	0.58
2:D:172:ARG:HH21	2:D:191:ASN:HD22	1.50	0.58
1:A:766:SER:HB3	1:A:808:LEU:HD23	1.85	0.58
1:A:771:PHE:CE2	1:A:845:GLN:HB3	2.39	0.58
1:B:310:ILE:HG21	1:B:328:LEU:HD12	1.86	0.58
1:B:864:LYS:HE2	1:B:891:TYR:CE2	2.35	0.58
1:B:432:GLN:CD	1:B:454:ASP:O	2.47	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:842:GLU:HG2	2:D:128:LYS:NZ	2.18	0.58
1:A:578:HIS:CD2	1:A:623:LEU:H	2.22	0.58
1:A:864:LYS:HE2	1:A:891:TYR:HE2	1.68	0.58
1:B:143:ILE:HG12	1:B:154:ALA:HB2	1.85	0.58
1:B:437:MET:HB2	1:B:446:THR:HG23	1.85	0.58
1:B:910:MET:HE3	1:B:912:LEU:HD21	1.86	0.58
1:A:262:ASN:HD21	1:A:316:TYR:H	1.48	0.57
1:B:248:ILE:C	1:B:250:PRO:HD3	2.29	0.57
1:B:294:THR:CG2	1:B:295:VAL:H	2.11	0.57
2:D:108:THR:HG22	2:D:109:PRO:N	2.17	0.57
1:B:1039:LEU:HD12	1:B:1040:VAL:H	1.69	0.57
1:B:1118:SER:O	1:B:1119:GLY:C	2.47	0.57
2:D:173:ARG:HH12	2:D:218:CYS:HB3	1.69	0.57
1:B:486:LEU:HG	1:B:486:LEU:O	2.05	0.57
1:B:1028:VAL:O	1:B:1039:LEU:HD12	2.05	0.57
1:B:1108:VAL:HG12	1:B:1109:VAL:N	2.19	0.57
2:D:108:THR:CB	2:D:109:PRO:HD3	2.34	0.57
1:B:433:THR:HG22	1:B:433:THR:O	2.03	0.57
1:B:450:GLY:O	1:B:479:VAL:CG2	2.49	0.57
1:B:465:HIS:O	1:B:467:GLN:HG3	2.04	0.57
2:D:108:THR:O	2:D:109:PRO:C	2.46	0.57
1:A:117:GLU:O	1:A:119:GLY:N	2.37	0.57
1:B:256:SER:HB3	1:B:277:GLU:OE2	2.04	0.57
1:B:500:VAL:HB	1:B:511:ALA:HB3	1.85	0.57
1:B:550:ASN:O	1:B:552:LEU:N	2.38	0.57
1:B:769:LYS:HD2	1:B:769:LYS:N	2.18	0.57
1:B:24:THR:N	1:B:30:ASN:HD21	1.92	0.57
1:B:365:VAL:O	1:B:367:LEU:CD2	2.52	0.57
1:B:504:ASN:OD1	1:B:507:GLN:N	2.31	0.57
1:A:1032:THR:CG2	1:A:1036:MET:H	2.17	0.57
1:B:1054:MET:HE2	1:B:1054:MET:HA	1.87	0.57
1:A:507:GLN:HE22	1:A:553:SER:H	1.51	0.57
1:B:743:GLN:NE2	1:B:781:SER:OG	2.30	0.57
1:B:876:PHE:CE1	1:B:921:ILE:HD11	2.40	0.57
1:B:1039:LEU:HD21	1:B:1139:ILE:HG22	1.87	0.57
1:A:894:THR:HG22	1:B:585:GLU:OE1	2.04	0.57
1:B:433:THR:HG21	1:B:457:THR:CB	2.35	0.57
1:B:641:PHE:HB3	1:B:679:MET:HE1	1.86	0.56
2:C:35:THR:C	2:C:36:SER:O	2.42	0.56
1:A:1101:SER:HB2	1:A:1103:PRO:HD2	1.87	0.56
1:B:731:GLN:CA	1:B:796:GLN:HE21	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1057:ARG:CZ	1:B:1112:LEU:HB2	2.35	0.56
2:D:202:ARG:HD2	2:D:204:PHE:CZ	2.39	0.56
1:A:722:ARG:HG3	1:A:722:ARG:NH1	2.19	0.56
1:B:503:CYS:SG	1:B:508:VAL:HG22	2.46	0.56
1:B:731:GLN:O	1:B:796:GLN:HG2	2.05	0.56
1:B:744:ASP:OD2	1:B:747:GLY:N	2.37	0.56
1:B:1014:MET:CG	1:B:1015:GLN:N	2.68	0.56
1:A:225:PRO:HG2	1:A:267:ASN:HB2	1.87	0.56
1:B:159:LEU:CD2	1:B:161:GLU:HB2	2.36	0.56
1:B:334:VAL:HG12	1:B:349:ALA:HA	1.88	0.56
1:B:1075:SER:HB2	1:B:1084:PRO:HA	1.88	0.56
2:C:97:PRO:HA	2:C:202:ARG:HA	1.86	0.56
1:A:417:PRO:CG	1:A:481:GLN:HB3	2.33	0.56
1:A:476:VAL:HG13	1:A:490:TRP:HB3	1.86	0.56
1:B:255:GLN:NE2	1:B:255:GLN:N	2.52	0.56
1:B:261:HIS:HA	1:B:272:LEU:O	2.06	0.56
1:B:275:ASP:OD1	1:B:279:ARG:HB2	2.04	0.56
2:C:52:THR:HB	2:C:86:VAL:H	1.71	0.56
2:D:192:PRO:C	2:D:194:CYS:N	2.62	0.56
1:A:19:VAL:HG22	1:A:20:THR:N	2.21	0.56
1:A:108:VAL:O	1:A:141:LYS:HE2	2.05	0.56
1:A:334:VAL:HG11	1:A:347:VAL:HG13	1.88	0.56
1:A:564:ILE:HD12	1:A:564:ILE:H	1.71	0.56
1:B:1125:THR:HG22	1:B:1127:ASP:N	2.15	0.56
2:C:215:CYS:H	2:C:218:CYS:HB2	1.70	0.56
1:A:224:GLU:HB2	1:A:225:PRO:HD3	1.87	0.56
1:B:178:ILE:HG23	1:B:193:TYR:O	2.03	0.56
2:C:99:PRO:HG3	2:C:106:ASP:O	2.05	0.56
1:B:560:LEU:HD12	1:B:567:ARG:HH11	1.71	0.56
2:D:102:LEU:CD1	2:D:180:VAL:HG22	2.36	0.56
2:D:169:GLY:HA2	2:D:211:CYS:HA	1.87	0.56
1:A:707:ILE:HG23	1:A:708:GLN:HG2	1.87	0.56
1:B:429:PHE:O	1:B:432:GLN:N	2.28	0.56
1:B:511:ALA:HB2	1:B:541:LEU:HD11	1.87	0.56
1:A:589:ARG:HG3	1:A:635:PRO:CB	2.34	0.56
1:A:852:GLN:HG2	1:A:854:SER:H	1.71	0.56
1:B:159:LEU:HD21	1:B:161:GLU:HB2	1.87	0.56
1:B:262:ASN:ND2	1:B:316:TYR:H	2.03	0.56
1:B:367:LEU:CG	1:B:374:GLN:CG	2.66	0.56
2:C:163:ARG:HB3	2:C:195:SER:O	2.04	0.56
1:B:223:PRO:HD3	1:B:271:TYR:OH	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:662:SER:CB	1:B:1138:ARG:HH21	2.19	0.55
1:B:573:SER:O	1:B:574:PHE:HB2	2.05	0.55
2:C:90:ASP:OD1	2:C:92:THR:HB	2.07	0.55
2:C:100:ASN:HB3	2:C:103:LEU:HG	1.87	0.55
1:A:838:PRO:HD2	1:A:839:GLU:OE2	2.05	0.55
1:B:626:ARG:O	1:B:626:ARG:HG2	2.06	0.55
2:D:159:ILE:HG22	2:D:159:ILE:O	2.07	0.55
1:A:340:SER:HB3	1:A:346:TYR:CE1	2.41	0.55
1:A:537:GLU:HB3	1:A:561:TRP:HB2	1.87	0.55
1:B:206:PRO:HB2	1:B:207:TRP:CE3	2.41	0.55
1:B:342:GLU:C	1:B:344:GLY:H	2.15	0.55
1:B:367:LEU:CG	1:B:374:GLN:CD	2.80	0.55
1:B:498:ILE:HG22	1:B:512:VAL:HG22	1.88	0.55
2:D:113:THR:HG22	2:D:114:VAL:N	2.21	0.55
1:B:235:GLU:H	1:B:253:ILE:CG2	2.19	0.55
1:B:1120:MET:O	1:B:1121:LYS:HB3	2.06	0.55
2:D:51:LEU:HD12	2:D:142:THR:N	2.21	0.55
2:D:87:PRO:HG3	2:D:91:LYS:NZ	2.22	0.55
1:A:117:GLU:C	1:A:119:GLY:N	2.64	0.55
1:A:250:PRO:HG2	1:A:253:ILE:HG12	1.89	0.55
1:A:634:GLN:HG2	1:A:654:ASP:OD1	2.06	0.55
1:B:235:GLU:O	1:B:236:SER:HB2	2.07	0.55
1:B:389:ILE:N	1:B:389:ILE:HD12	2.22	0.55
1:B:1002:GLU:HB3	1:B:1032:THR:HG21	1.88	0.55
2:D:19:THR:HG22	2:D:20:GLY:N	2.19	0.55
1:A:811:GLU:HB2	1:A:835:MET:SD	2.47	0.55
1:A:1119:GLY:HA3	1:B:984:THR:HG23	1.89	0.55
1:B:304:LEU:C	1:B:304:LEU:HD23	2.32	0.55
1:B:329:GLY:HA3	1:B:384:GLU:CG	2.34	0.55
1:B:413:LEU:C	1:B:413:LEU:HD23	2.32	0.55
2:C:52:THR:OG1	2:C:85:ILE:HA	2.07	0.55
2:D:143:ARG:HB3	2:D:143:ARG:NH1	2.22	0.55
1:A:369:ARG:O	1:A:370:GLN:CB	2.54	0.55
1:A:855:ASP:CG	1:A:856:GLY:N	2.65	0.55
1:B:427:LEU:HD12	1:B:427:LEU:H	1.72	0.55
1:B:744:ASP:OD2	1:B:746:SER:C	2.50	0.55
1:B:1065:VAL:O	1:B:1067:LYS:N	2.40	0.55
1:B:355:ASN:C	1:B:357:GLY:N	2.62	0.55
1:B:1022:THR:C	1:B:1024:THR:N	2.65	0.55
1:B:494:GLN:O	1:B:494:GLN:HG2	2.05	0.54
1:B:1108:VAL:C	1:B:1110:ALA:H	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:396:ILE:HD11	1:B:673:LEU:CD1	2.37	0.54
1:B:976:VAL:O	1:B:994:GLU:O	2.24	0.54
1:B:1102:ARG:HB2	1:B:1103:PRO:HD3	1.88	0.54
1:B:47:GLU:CD	1:B:47:GLU:H	2.14	0.54
1:B:475:SER:HB2	1:B:490:TRP:O	2.08	0.54
1:B:1095:GLU:HG2	1:B:1137:THR:HG22	1.89	0.54
1:A:146:ASP:O	1:A:148:ASP:N	2.41	0.54
1:A:969:GLU:HG2	1:A:970:ASN:N	2.23	0.54
1:B:242:GLY:O	1:B:243:ASP:CB	2.56	0.54
2:C:161:PHE:HZ	2:C:196:PRO:HA	1.73	0.54
1:B:165:ILE:HG21	1:B:217:SER:HA	1.90	0.54
1:B:477:ARG:HD2	1:B:489:GLU:HG3	1.90	0.54
1:B:560:LEU:HD12	1:B:567:ARG:NH1	2.22	0.54
1:B:881:LEU:HD22	1:B:921:ILE:HD12	1.88	0.54
1:B:1065:VAL:HG12	1:B:1066:GLY:N	2.23	0.54
2:C:95:GLY:O	2:C:202:ARG:HD2	2.07	0.54
2:D:18:GLU:OE1	2:D:18:GLU:HA	2.06	0.54
1:B:282:MET:HE2	1:B:305:LEU:HD11	1.89	0.54
1:B:401:SER:HA	1:B:700:THR:HG22	1.89	0.54
2:C:50:LEU:CD2	2:C:86:VAL:HG21	2.37	0.54
2:D:170:PHE:HD1	2:D:170:PHE:H	1.56	0.54
1:A:396:ILE:CD1	1:A:396:ILE:N	2.69	0.54
1:A:416:ASP:CB	1:A:419:ARG:HG3	2.35	0.54
1:A:665:LYS:HD3	1:A:1138:ARG:CZ	2.37	0.54
1:B:430:VAL:HG13	1:B:456:GLN:CB	2.34	0.54
1:B:467:GLN:CD	1:B:478:LEU:HD21	2.33	0.54
2:D:102:LEU:CD1	2:D:180:VAL:CG2	2.86	0.54
1:A:189:HIS:HB3	1:A:210:GLU:HA	1.90	0.54
1:A:612:PHE:CE2	1:A:628:LYS:HD2	2.43	0.54
1:B:182:TYR:CZ	1:B:189:HIS:HB2	2.43	0.54
1:B:228:GLY:HA2	1:B:241:ASN:HA	1.90	0.54
1:B:504:ASN:ND2	1:B:507:GLN:HB2	2.22	0.54
1:B:516:LEU:HD13	1:B:534:MET:HG2	1.90	0.54
1:B:717:LEU:HD12	1:B:721:PRO:HG3	1.90	0.54
1:B:1036:MET:O	1:B:1037:ILE:CB	2.56	0.54
1:B:1102:ARG:O	1:B:1106:GLN:HG3	2.08	0.54
2:D:22:ASN:O	2:D:23:THR:C	2.51	0.54
1:A:130:MET:HA	1:A:145:LEU:HD13	1.90	0.54
1:B:224:GLU:O	1:B:225:PRO:C	2.50	0.54
1:B:616:LEU:HD12	1:B:617:ASN:N	2.22	0.54
1:B:866:VAL:CG1	1:B:884:ILE:HG21	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1075:SER:HB2	1:B:1083:GLU:O	2.08	0.54
2:C:206:CYS:SG	2:C:211:CYS:HB3	2.48	0.54
2:D:17:ILE:HD11	2:D:139:ASN:ND2	2.23	0.54
1:A:889:ARG:NH1	1:A:904:ASN:ND2	2.49	0.53
1:B:652:CYS:HB3	1:B:676:VAL:O	2.09	0.53
1:B:949:PHE:HA	2:D:122:LEU:HD21	1.89	0.53
2:D:98:ILE:HB	2:D:201:ALA:CB	2.36	0.53
1:A:582:LEU:O	1:A:583:GLY:C	2.51	0.53
2:C:215:CYS:O	2:C:219:GLU:OE1	2.25	0.53
2:D:90:ASP:O	2:D:91:LYS:HG3	2.07	0.53
2:D:171:HIS:ND1	2:D:215:CYS:HB3	2.23	0.53
1:B:511:ALA:HA	1:B:515:ALA:O	2.09	0.53
1:B:771:PHE:CE2	1:B:845:GLN:HB2	2.43	0.53
2:C:144:PHE:HB2	2:C:175:TYR:HB2	1.91	0.53
2:D:50:LEU:O	2:D:51:LEU:C	2.51	0.53
1:A:867:LYS:H	1:A:867:LYS:HD2	1.73	0.53
1:B:564:ILE:HG22	1:B:582:LEU:HD12	1.91	0.53
1:A:354:THR:HG21	1:A:712:ILE:HD12	1.91	0.53
1:B:414:ARG:HH21	1:B:462:ASN:HB2	1.74	0.53
1:A:183:GLN:HB2	1:A:188:ARG:HG2	1.90	0.53
1:A:741:GLU:CD	1:A:750:THR:O	2.52	0.53
1:B:19:VAL:O	1:B:31:LEU:HD12	2.08	0.53
1:B:170:LEU:HD12	1:B:177:THR:HG22	1.90	0.53
1:B:413:LEU:HD22	1:B:424:THR:HB	1.90	0.53
1:B:644:LEU:HG	1:B:645:SER:N	2.24	0.53
1:B:731:GLN:CA	1:B:796:GLN:NE2	2.71	0.53
2:C:143:ARG:NH2	2:C:174:GLU:OE1	2.42	0.53
2:D:89:ASP:CG	2:D:202:ARG:HH21	2.17	0.53
2:D:102:LEU:HD23	2:D:102:LEU:C	2.33	0.53
2:D:169:GLY:O	2:D:212:PRO:CG	2.51	0.53
1:A:487:VAL:HG23	1:A:524:GLN:HA	1.91	0.53
1:A:707:ILE:CG2	1:A:708:GLN:HG2	2.39	0.53
1:A:725:CYS:O	1:A:733:PHE:HD2	1.92	0.53
1:B:90:GLU:HB3	1:B:101:ILE:HG12	1.91	0.53
1:B:586:ILE:HG21	1:B:608:ASP:H	1.72	0.53
1:B:1020:THR:O	1:B:1021:SER:HB2	2.08	0.53
1:A:95:GLY:C	1:A:97:SER:H	2.15	0.53
1:A:23:PHE:N	1:A:30:ASN:ND2	2.48	0.53
1:B:159:LEU:HD23	1:B:161:GLU:N	2.22	0.53
1:B:340:SER:HB3	1:B:346:TYR:CD1	2.43	0.53
1:B:731:GLN:C	1:B:796:GLN:HE21	2.17	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:369:ARG:CG	1:B:369:ARG:O	2.56	0.52
1:B:476:VAL:C	1:B:477:ARG:HD3	2.34	0.52
1:B:1015:GLN:O	1:B:1016:ASN:C	2.52	0.52
1:B:1079:GLU:OE2	1:B:1079:GLU:HA	2.09	0.52
2:C:179:TRP:O	2:C:180:VAL:HB	2.09	0.52
1:B:134:ARG:NH1	1:B:164:VAL:HB	2.25	0.52
1:B:369:ARG:NH1	1:B:670:ASN:HB3	2.22	0.52
2:D:87:PRO:HG3	2:D:91:LYS:CE	2.39	0.52
2:D:110:SER:O	2:D:221:ASP:HA	2.10	0.52
2:D:169:GLY:N	2:D:211:CYS:SG	2.69	0.52
1:A:275:ASP:CB	1:A:279:ARG:HB2	2.38	0.52
1:A:334:VAL:CG1	1:A:347:VAL:HG13	2.39	0.52
1:B:1015:GLN:O	1:B:1015:GLN:HG3	2.09	0.52
2:D:202:ARG:HB3	2:D:204:PHE:CE1	2.44	0.52
1:A:1030:PHE:CZ	1:A:1038:GLY:HA3	2.44	0.52
1:B:162:LEU:HG	1:B:163:HIS:H	1.74	0.52
2:D:143:ARG:NH2	2:D:174:GLU:OE1	2.42	0.52
1:A:449:MET:HE2	1:A:449:MET:HA	1.92	0.52
1:B:29:LEU:HB3	1:B:44:VAL:HB	1.91	0.52
1:B:180:PHE:CE1	1:B:182:TYR:HB3	2.45	0.52
1:B:475:SER:OG	1:B:477:ARG:NH1	2.42	0.52
1:B:571:LEU:HD13	1:B:571:LEU:C	2.34	0.52
1:B:741:GLU:OE1	1:B:749:THR:HB	2.09	0.52
1:B:973:ASN:ND2	1:B:1077:HIS:H	2.06	0.52
2:D:18:GLU:O	2:D:42:THR:HG23	2.09	0.52
2:D:90:ASP:CG	2:D:91:LYS:H	2.18	0.52
1:A:476:VAL:CG1	1:A:490:TRP:HB3	2.40	0.52
1:A:848:ILE:CD1	1:A:870:VAL:HG11	2.40	0.52
2:C:86:VAL:HG13	2:C:87:PRO:HD2	1.92	0.52
2:D:115:LEU:HD23	2:D:123:PRO:HB3	1.90	0.52
1:A:112:ILE:HD13	1:A:112:ILE:N	2.22	0.52
1:A:655:ARG:HG3	1:A:655:ARG:HH11	1.74	0.52
1:A:922:LEU:HD23	1:A:957:VAL:HG13	1.91	0.52
1:B:10:GLN:O	1:B:1036:MET:O	2.28	0.52
2:C:161:PHE:O	2:C:162:LYS:HB2	2.10	0.52
1:A:780:THR:HB	1:A:784:GLU:CB	2.39	0.52
1:B:489:GLU:OE2	1:B:491:LYS:HE3	2.10	0.52
1:A:309:SER:HA	1:A:384:GLU:OE2	2.10	0.51
1:B:228:GLY:CA	1:B:241:ASN:HA	2.40	0.51
1:B:237:ILE:O	1:B:248:ILE:HG12	2.09	0.51
1:B:383:LYS:HG3	1:B:384:GLU:OE2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:109:PRO:HG2	2:C:203:ARG:NH1	2.24	0.51
2:D:171:HIS:CB	2:D:215:CYS:HB3	2.40	0.51
1:A:116:SER:C	1:A:117:GLU:O	2.51	0.51
1:A:837:TYR:HB3	1:A:839:GLU:OE2	2.10	0.51
1:B:281:PHE:CD2	1:B:304:LEU:HA	2.46	0.51
1:B:769:LYS:O	1:B:769:LYS:HG2	2.11	0.51
2:D:86:VAL:HG13	2:D:87:PRO:HD2	1.92	0.51
2:D:104:GLY:O	2:D:105:LEU:HB3	2.11	0.51
1:A:780:THR:HG22	1:A:781:SER:N	2.24	0.51
1:B:5:TYR:HB2	1:B:1043:LEU:HD11	1.93	0.51
1:B:1121:LYS:O	1:B:1121:LYS:HG2	2.10	0.51
1:A:57:MET:HE3	1:A:1065:VAL:CG1	2.40	0.51
1:A:1114:TYR:CB	1:A:1124:ALA:HB2	2.41	0.51
1:B:910:MET:HB2	1:B:926:LEU:CB	2.41	0.51
2:D:21:LEU:HD22	2:D:26:TYR:CD1	2.46	0.51
1:A:912:LEU:HB2	1:A:913:TYR:CE1	2.46	0.51
1:B:355:ASN:OD1	1:B:357:GLY:N	2.43	0.51
1:B:393:GLY:HA2	1:B:708:GLN:HG2	1.92	0.51
1:B:1126:ALA:O	1:B:1130:ILE:HG13	2.10	0.51
2:C:49:GLY:HA3	2:C:141:MET:HE1	1.92	0.51
2:D:87:PRO:HG3	2:D:91:LYS:HE3	1.93	0.51
2:D:90:ASP:CG	2:D:91:LYS:N	2.68	0.51
1:B:368:GLU:O	1:B:369:ARG:C	2.53	0.51
1:B:388:ARG:NE	1:B:714:THR:HG23	2.26	0.51
1:B:419:ARG:HD2	1:B:423:ASP:OD1	2.11	0.51
2:C:216:SER:HA	2:C:219:GLU:OE2	2.10	0.51
2:D:98:ILE:HG22	2:D:99:PRO:O	2.11	0.51
2:D:110:SER:N	2:D:221:ASP:HB3	2.25	0.51
1:A:634:GLN:HB3	1:A:635:PRO:HD2	1.93	0.51
1:B:130:MET:HA	1:B:145:LEU:CB	2.41	0.51
1:B:255:GLN:HE21	1:B:255:GLN:N	2.04	0.51
1:B:290:GLN:NE2	1:B:293:GLY:HA3	2.19	0.51
2:C:215:CYS:SG	2:C:217:GLU:HB2	2.51	0.51
2:D:171:HIS:CG	2:D:215:CYS:HB3	2.46	0.51
1:B:309:SER:O	1:B:310:ILE:C	2.54	0.51
2:C:100:ASN:HB3	2:C:103:LEU:CD1	2.40	0.51
2:C:167:THR:O	2:C:193:SER:HB3	2.10	0.51
2:D:109:PRO:HB2	2:D:203:ARG:NH2	2.25	0.51
2:D:163:ARG:NH1	2:D:197:ILE:HD11	2.25	0.51
1:A:537:GLU:HB3	1:A:561:TRP:CB	2.41	0.51
1:A:1026:GLY:O	1:A:1027:SER:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1101:SER:CB	1:A:1103:PRO:HD2	2.41	0.51
1:B:41:ILE:O	1:B:52:VAL:HG22	2.11	0.51
1:B:451:PHE:HE2	1:B:453:ASP:HB3	1.76	0.51
1:B:699:LEU:C	1:B:699:LEU:HD13	2.35	0.51
1:B:986:ASP:O	1:B:990:GLN:HB2	2.10	0.51
2:D:82:LYS:O	2:D:83:ILE:HD12	2.10	0.51
2:D:218:CYS:O	2:D:221:ASP:HB2	2.11	0.51
1:B:480:SER:O	1:B:484:LYS:HA	2.11	0.51
2:C:108:THR:O	2:C:222:THR:CA	2.58	0.51
2:C:178:GLY:C	2:C:179:TRP:HE3	2.19	0.51
1:B:230:ILE:HD13	1:B:239:TYR:HD1	1.75	0.50
1:B:687:TYR:O	1:B:688:PRO:O	2.29	0.50
1:A:342:GLU:C	1:A:344:GLY:H	2.20	0.50
1:A:410:LEU:HD23	1:A:410:LEU:N	2.25	0.50
1:B:63:VAL:HB	1:B:80:LEU:CB	2.40	0.50
1:B:134:ARG:C	1:B:134:ARG:HD2	2.36	0.50
1:B:161:GLU:HB3	1:B:182:TYR:HB2	1.93	0.50
1:B:1065:VAL:C	1:B:1067:LYS:N	2.69	0.50
2:C:97:PRO:CD	2:C:202:ARG:HD3	2.42	0.50
1:A:256:SER:OG	1:A:277:GLU:HG3	2.11	0.50
1:B:151:GLU:CD	1:B:151:GLU:N	2.70	0.50
1:B:861:VAL:HG12	1:B:862:ALA:N	2.26	0.50
2:D:89:ASP:OD1	2:D:90:ASP:N	2.45	0.50
1:A:34:ALA:HB2	1:A:64:MET:CE	2.41	0.50
1:B:769:LYS:N	1:B:769:LYS:CD	2.74	0.50
2:C:83:ILE:O	2:C:84:ALA:HB3	2.12	0.50
1:A:465:HIS:CE1	1:A:523:PRO:HD3	2.47	0.50
1:A:762:SER:HB2	1:A:803:HIS:HA	1.93	0.50
1:A:794:ILE:HG23	1:A:799:PHE:HA	1.92	0.50
1:A:1080:ARG:HD2	2:C:119:GLY:HA3	1.93	0.50
1:B:84:TYR:CG	1:B:109:GLN:HB3	2.46	0.50
1:B:250:PRO:C	1:B:252:ILE:H	2.18	0.50
1:B:568:ILE:O	1:B:569:LEU:HD23	2.11	0.50
1:B:571:LEU:HB3	1:B:572:PRO:HD3	1.93	0.50
2:D:114:VAL:HG22	2:D:185:LYS:CD	2.39	0.50
2:D:165:ARG:HG2	2:D:165:ARG:HH11	1.76	0.50
1:A:1118:SER:C	1:A:1120:MET:N	2.70	0.50
1:B:212:VAL:HG12	1:B:213:GLU:N	2.27	0.50
1:B:223:PRO:HG2	1:B:268:GLY:CA	2.42	0.50
1:B:432:GLN:NE2	1:B:454:ASP:O	2.44	0.50
1:B:921:ILE:HB	1:B:933:LEU:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:162:LYS:O	2:C:162:LYS:HG3	2.11	0.50
1:B:55:VAL:HG21	1:B:100:ILE:HG13	1.93	0.50
1:B:410:LEU:HA	1:B:426:VAL:O	2.11	0.50
1:B:476:VAL:CG1	1:B:490:TRP:HB3	2.38	0.50
1:B:724:ILE:HA	1:B:734:GLY:O	2.12	0.50
2:C:108:THR:HA	2:C:222:THR:O	2.11	0.50
2:C:116:ASP:OD2	2:C:119:GLY:O	2.28	0.50
2:D:95:GLY:O	2:D:202:ARG:NH1	2.38	0.50
2:D:116:ASP:C	2:D:118:SER:H	2.19	0.50
1:A:580:GLU:HG2	1:A:614:PHE:CE2	2.47	0.50
1:B:553:SER:O	1:B:571:LEU:HG	2.11	0.50
1:B:969:GLU:HG2	1:B:970:ASN:N	2.26	0.50
1:B:994:GLU:HG3	1:B:995:VAL:N	2.26	0.50
2:C:97:PRO:HD3	2:C:202:ARG:HD3	1.94	0.50
2:D:171:HIS:NE2	2:D:212:PRO:CG	2.68	0.50
1:A:704:ILE:CG2	1:A:705:ASP:N	2.73	0.50
1:B:133:LEU:N	1:B:133:LEU:HD12	2.26	0.50
1:B:391:ARG:HG2	1:B:392:ASN:N	2.26	0.50
1:A:597:GLU:OE2	1:A:664:HIS:N	2.41	0.49
1:B:377:THR:O	1:B:387:LEU:HA	2.12	0.49
1:B:468:LEU:HD13	1:B:481:GLN:HG2	1.94	0.49
1:B:675:GLU:HG2	1:B:676:VAL:N	2.27	0.49
1:B:728:GLU:C	1:B:730:SER:H	2.20	0.49
2:C:52:THR:O	2:C:53:ASN:C	2.45	0.49
1:B:91:TYR:OH	1:B:98:ILE:HD12	2.12	0.49
2:D:169:GLY:C	2:D:212:PRO:HD2	2.24	0.49
1:A:1032:THR:HG22	1:A:1036:MET:N	2.25	0.49
1:B:170:LEU:HD12	1:B:177:THR:CG2	2.40	0.49
1:B:790:ASN:N	1:B:790:ASN:ND2	2.58	0.49
1:B:1017:LEU:C	1:B:1019:GLU:H	2.20	0.49
1:B:1080:ARG:NE	1:B:1080:ARG:HA	2.28	0.49
2:D:48:THR:HB	2:D:145:ILE:CD1	2.42	0.49
1:A:125:ASP:OD2	1:A:127:GLU:HB2	2.12	0.49
1:A:356:LEU:O	1:A:379:SER:HB3	2.12	0.49
1:A:594:THR:HG23	1:A:595:THR:N	2.26	0.49
1:A:1057:ARG:NH1	1:A:1112:LEU:HB2	2.28	0.49
1:B:262:ASN:ND2	1:B:315:THR:HA	2.26	0.49
1:B:359:ILE:HG13	1:B:1035:GLY:HA2	1.95	0.49
1:B:548:ASP:O	1:B:550:ASN:N	2.45	0.49
1:B:743:GLN:HB2	1:B:783:GLY:H	1.78	0.49
2:C:102:LEU:C	2:C:104:GLY:H	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:546:LEU:HD11	1:B:593:MET:HB3	1.95	0.49
1:B:614:PHE:N	1:B:614:PHE:CD1	2.79	0.49
1:A:29:LEU:HG	1:A:44:VAL:HG21	1.94	0.49
1:B:467:GLN:HB3	1:B:478:LEU:HD21	1.94	0.49
1:A:337:ASN:O	1:A:346:TYR:HB3	2.12	0.49
1:A:745:THR:C	1:A:747:GLY:H	2.21	0.49
1:A:794:ILE:CG2	1:A:799:PHE:HA	2.43	0.49
1:B:910:MET:CE	1:B:912:LEU:HD21	2.43	0.49
1:A:2:SER:HB2	1:A:995:VAL:CG2	2.42	0.49
1:A:365:VAL:CG1	1:A:367:LEU:HG	2.43	0.49
1:A:576:LEU:HD22	1:A:578:HIS:H	1.77	0.49
1:A:1113:GLN:HA	1:A:1113:GLN:OE1	2.12	0.49
1:B:226:PHE:HD2	1:B:297:LEU:HB2	1.76	0.49
2:C:97:PRO:N	2:C:202:ARG:HD3	2.28	0.49
2:D:103:LEU:O	2:D:105:LEU:HD23	2.12	0.49
1:B:114:ARG:HG3	1:B:137:ASP:OD2	2.12	0.49
1:B:257:THR:HG22	1:B:258:ILE:N	2.28	0.49
1:B:358:PRO:O	1:B:379:SER:HA	2.13	0.49
1:B:477:ARG:HB3	1:B:489:GLU:HG3	1.95	0.49
1:B:485:ALA:O	1:B:487:VAL:HG13	2.13	0.49
1:B:876:PHE:HD1	1:B:916:THR:HG21	1.78	0.49
1:A:44:VAL:HG11	1:A:317:LEU:HB3	1.94	0.49
1:A:564:ILE:N	1:A:564:ILE:CD1	2.75	0.49
1:A:903:CYS:CB	1:A:941:ASN:HA	2.43	0.49
1:B:57:MET:CE	1:B:1066:GLY:H	2.23	0.49
1:B:267:ASN:HD21	1:B:269:SER:CB	2.13	0.49
1:B:451:PHE:CE2	1:B:453:ASP:HB3	2.48	0.49
1:B:665:LYS:HD3	1:B:1138:ARG:CZ	2.43	0.49
1:B:771:PHE:HE2	1:B:845:GLN:HB2	1.76	0.49
2:C:179:TRP:O	2:C:183:GLU:O	2.30	0.49
1:A:446:THR:HG22	1:A:447:GLU:N	2.28	0.48
1:A:657:THR:HG23	1:A:669:SER:O	2.12	0.48
1:A:926:LEU:O	1:A:953:TRP:HA	2.12	0.48
2:C:40:LYS:HG2	2:C:42:THR:HG23	1.95	0.48
1:A:177:THR:CG2	1:A:194:GLU:HG2	2.43	0.48
1:B:165:ILE:CD1	1:B:188:ARG:HH12	2.25	0.48
1:B:602:LEU:C	1:B:602:LEU:HD13	2.38	0.48
2:C:136:GLY:O	2:C:139:ASN:O	2.31	0.48
2:D:177:ILE:HG23	2:D:186:VAL:HG22	1.95	0.48
1:A:385:GLY:HA3	1:A:719:GLU:O	2.13	0.48
1:A:589:ARG:HG2	1:A:589:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:594:THR:CG2	1:A:595:THR:N	2.75	0.48
1:A:876:PHE:HD1	1:A:916:THR:HG21	1.78	0.48
1:A:1121:LYS:HZ3	1:A:1121:LYS:HB2	1.78	0.48
1:B:130:MET:HE3	1:B:195:VAL:HG11	1.96	0.48
1:B:355:ASN:CG	1:B:357:GLY:H	2.21	0.48
1:B:843:PRO:HD3	2:D:22:ASN:HD21	1.78	0.48
1:A:95:GLY:C	1:A:97:SER:N	2.71	0.48
1:A:288:GLU:HB3	1:A:296:THR:CG2	2.42	0.48
1:A:413:LEU:HD23	1:A:462:ASN:OD1	2.14	0.48
1:A:487:VAL:O	1:A:488:SER:HB2	2.13	0.48
1:B:423:ASP:O	1:B:438:LEU:HB2	2.12	0.48
1:B:437:MET:CB	1:B:446:THR:HG23	2.43	0.48
1:B:612:PHE:CE2	1:B:628:LYS:HD2	2.49	0.48
1:B:1047:TRP:HZ3	1:B:1132:VAL:HG13	1.79	0.48
2:C:48:THR:HG23	2:C:82:LYS:HG2	1.94	0.48
2:C:160:ASP:OD2	2:C:161:PHE:N	2.47	0.48
2:C:192:PRO:HB3	2:C:206:CYS:SG	2.53	0.48
2:D:22:ASN:C	2:D:22:ASN:HD22	2.20	0.48
2:D:163:ARG:NH1	2:D:197:ILE:CD1	2.76	0.48
1:A:81:THR:CG2	1:A:82:ALA:N	2.75	0.48
1:A:239:TYR:CE2	1:A:241:ASN:HB2	2.48	0.48
1:B:52:VAL:HG23	1:B:53:LYS:N	2.29	0.48
1:B:821:LEU:O	1:B:822:GLY:C	2.57	0.48
2:D:104:GLY:C	2:D:105:LEU:HD23	2.39	0.48
2:D:140:LEU:N	2:D:140:LEU:HD23	2.29	0.48
1:A:475:SER:HB2	1:A:490:TRP:O	2.13	0.48
1:B:239:TYR:CE2	1:B:241:ASN:HB2	2.48	0.48
1:B:824:ASP:OD2	1:B:828:TYR:OH	2.28	0.48
1:B:896:GLU:O	1:B:897:LYS:HB2	2.12	0.48
2:C:50:LEU:HD22	2:C:86:VAL:HG21	1.95	0.48
2:D:173:ARG:NH1	2:D:190:CYS:SG	2.87	0.48
1:B:80:LEU:CD2	1:B:133:LEU:HD23	2.43	0.48
1:B:480:SER:OG	1:B:483:PRO:HD2	2.13	0.48
1:B:655:ARG:HG2	1:B:655:ARG:HH11	1.77	0.48
1:B:941:ASN:C	1:B:941:ASN:HD22	2.22	0.48
2:D:198:THR:HG21	2:D:204:PHE:HZ	1.78	0.48
1:A:401:SER:C	1:A:402:ILE:HD13	2.39	0.48
1:A:542:ASP:OD1	1:A:593:MET:N	2.45	0.48
1:B:356:LEU:O	1:B:357:GLY:C	2.57	0.48
1:B:617:ASN:OD1	1:B:619:GLU:HB2	2.14	0.48
1:B:786:VAL:HG23	1:B:786:VAL:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:19:THR:HA	2:D:43:ILE:HG23	1.96	0.48
1:A:256:SER:HB3	1:A:275:ASP:CG	2.39	0.48
1:A:318:ASP:O	1:A:319:ASN:C	2.57	0.48
1:A:537:GLU:O	1:A:561:TRP:HB2	2.14	0.48
1:A:954:MET:HE1	1:A:975:PHE:CZ	2.48	0.48
1:B:286:GLU:HB3	1:B:298:LYS:HD3	1.95	0.48
1:B:523:PRO:C	1:B:524:GLN:NE2	2.72	0.48
1:B:1007:PHE:CD2	1:B:1030:PHE:HB3	2.49	0.48
2:C:18:GLU:OE1	2:C:40:LYS:HD2	2.14	0.48
2:D:108:THR:CB	2:D:109:PRO:CD	2.92	0.48
1:B:162:LEU:HD23	1:B:162:LEU:N	2.17	0.48
1:B:459:PHE:CD2	1:B:503:CYS:HB3	2.48	0.48
1:B:835:MET:HB2	1:B:845:GLN:HG3	1.95	0.48
2:D:115:LEU:HG	2:D:130:VAL:HG13	1.96	0.48
1:A:729:VAL:HG23	1:A:730:SER:N	2.28	0.47
1:A:839:GLU:CD	1:A:839:GLU:N	2.69	0.47
1:B:32:LEU:HD12	1:B:32:LEU:N	2.28	0.47
1:B:57:MET:HE3	1:B:1065:VAL:HB	1.95	0.47
1:B:81:THR:HG22	1:B:83:LYS:N	2.06	0.47
1:B:456:GLN:O	1:B:472:THR:HG22	2.14	0.47
1:B:794:ILE:HG22	1:B:799:PHE:HA	1.96	0.47
1:B:1014:MET:O	1:B:1015:GLN:HB3	2.14	0.47
2:D:103:LEU:O	2:D:105:LEU:N	2.47	0.47
1:A:1051:LEU:HB2	1:A:1089:ILE:HD13	1.95	0.47
1:A:1102:ARG:N	1:A:1103:PRO:CD	2.78	0.47
1:B:427:LEU:HD13	1:B:429:PHE:CE1	2.48	0.47
1:B:532:THR:HB	1:B:574:PHE:CD1	2.49	0.47
2:C:177:ILE:N	2:C:177:ILE:HD12	2.29	0.47
1:A:112:ILE:H	1:A:112:ILE:CD1	2.20	0.47
2:C:215:CYS:H	2:C:218:CYS:CB	2.27	0.47
1:A:520:GLN:HG3	1:A:529:ILE:HD12	1.97	0.47
1:A:1051:LEU:CB	1:A:1089:ILE:HD13	2.44	0.47
1:B:68:ARG:HB2	1:B:75:ASP:OD2	2.14	0.47
1:B:199:GLU:HG3	1:B:201:GLU:CG	2.45	0.47
1:B:207:TRP:CZ3	1:B:241:ASN:O	2.68	0.47
1:B:458:PHE:CD1	1:B:458:PHE:N	2.82	0.47
1:B:847:ARG:NH1	1:B:849:VAL:HG22	2.29	0.47
1:B:991:HIS:HB3	1:B:993:GLN:NE2	2.29	0.47
2:C:16:LEU:O	2:C:41:ASN:HB2	2.14	0.47
2:D:21:LEU:HD22	2:D:26:TYR:HD1	1.78	0.47
1:A:1:MET:HA	1:A:1:MET:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:GLY:HA2	1:A:1073:TRP:CE3	2.48	0.47
1:A:256:SER:HB3	1:A:275:ASP:OD1	2.13	0.47
1:A:333:LEU:HD12	1:A:333:LEU:HA	1.75	0.47
1:A:570:LYS:HG3	1:A:572:PRO:HD2	1.97	0.47
1:B:242:GLY:O	1:B:243:ASP:HB2	2.14	0.47
2:D:22:ASN:C	2:D:22:ASN:ND2	2.72	0.47
1:A:213:GLU:OE1	1:A:236:SER:HB3	2.14	0.47
1:A:634:GLN:HG2	1:A:654:ASP:CG	2.40	0.47
1:B:886:SER:O	1:B:908:ASN:ND2	2.48	0.47
1:B:961:ASP:C	1:B:961:ASP:OD2	2.58	0.47
1:B:1048:TYR:HE2	1:B:1052:LEU:HD12	1.79	0.47
1:B:1115:ASP:HB2	1:B:1120:MET:CB	2.45	0.47
2:D:16:LEU:O	2:D:41:ASN:HB3	2.14	0.47
1:A:364:VAL:HG21	1:A:1010:GLY:HA3	1.97	0.47
1:A:367:LEU:HD12	1:A:374:GLN:NE2	2.30	0.47
1:A:518:TYR:CD1	1:A:571:LEU:HD22	2.49	0.47
1:A:597:GLU:HG3	1:A:661:SER:HB3	1.95	0.47
1:A:889:ARG:CD	1:A:901:THR:HG23	2.44	0.47
1:A:1055:GLN:HE22	1:A:1090:ASP:H	1.63	0.47
1:B:147:ARG:HA	1:B:147:ARG:NE	2.26	0.47
1:B:289:GLU:OE2	1:B:289:GLU:HA	2.14	0.47
1:B:722:ARG:NH1	2:D:28:THR:HG21	2.30	0.47
1:A:550:ASN:O	1:A:552:LEU:N	2.48	0.47
1:A:867:LYS:CE	1:A:889:ARG:NH2	2.77	0.47
1:A:969:GLU:OE2	1:A:971:ALA:HB3	2.14	0.47
1:B:131:ILE:HB	1:B:143:ILE:HB	1.96	0.47
1:B:147:ARG:O	1:B:148:ASP:C	2.58	0.47
1:B:290:GLN:HG3	1:B:293:GLY:H	1.80	0.47
1:B:458:PHE:N	1:B:458:PHE:HD1	2.13	0.47
1:B:514:ARG:HB2	1:B:537:GLU:HA	1.96	0.47
1:B:739:ARG:NH1	1:B:757:SER:OG	2.47	0.47
1:B:976:VAL:HG22	1:B:996:GLY:CA	2.35	0.47
1:B:1125:THR:HG22	1:B:1126:ALA:N	2.30	0.47
1:A:19:VAL:HG22	1:A:20:THR:H	1.78	0.47
1:A:68:ARG:HD2	1:A:74:LYS:C	2.40	0.47
1:A:213:GLU:OE2	1:A:215:GLU:HB2	2.14	0.47
1:A:235:GLU:O	1:A:249:ALA:HA	2.15	0.47
1:A:931:LEU:C	1:A:931:LEU:CD2	2.87	0.47
1:B:275:ASP:HB3	1:B:277:GLU:H	1.80	0.47
2:D:47:VAL:HG12	2:D:48:THR:H	1.79	0.47
2:D:108:THR:HB	2:D:109:PRO:CD	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:116:ASP:O	2:D:118:SER:N	2.45	0.47
1:A:479:VAL:HG12	1:A:480:SER:O	2.15	0.47
1:B:575:GLU:O	1:B:576:LEU:C	2.58	0.47
1:B:832:GLY:N	1:B:873:MET:HE2	2.30	0.47
1:A:110:ASP:HB2	1:A:136:TYR:CE1	2.50	0.46
1:A:465:HIS:O	1:A:467:GLN:HG3	2.15	0.46
1:A:741:GLU:HB3	1:A:750:THR:O	2.14	0.46
1:A:870:VAL:HG22	1:A:884:ILE:HG13	1.96	0.46
1:B:253:ILE:HG22	1:B:253:ILE:O	2.15	0.46
1:B:390:ILE:HG22	1:B:710:LEU:HD22	1.96	0.46
1:B:498:ILE:HG23	1:B:512:VAL:HG22	1.97	0.46
1:B:512:VAL:O	1:B:513:GLY:C	2.57	0.46
2:C:172:ARG:CZ	2:C:197:ILE:HG22	2.44	0.46
1:A:465:HIS:HB2	1:A:467:GLN:HE21	1.79	0.46
1:A:717:LEU:O	1:A:718:TYR:HB2	2.15	0.46
1:B:124:ILE:HG23	1:B:131:ILE:CD1	2.42	0.46
1:B:437:MET:HE2	1:B:444:GLU:HB2	1.97	0.46
2:C:147:GLU:HG2	2:C:172:ARG:HG3	1.96	0.46
1:A:360:VAL:O	1:A:360:VAL:HG12	2.16	0.46
1:A:927:MET:CE	2:C:130:VAL:HG11	2.46	0.46
1:B:408:LYS:CB	1:B:430:VAL:HG23	2.44	0.46
1:B:436:LEU:HA	1:B:445:GLU:HA	1.97	0.46
1:B:475:SER:HA	1:B:498:ILE:CD1	2.42	0.46
1:B:789:HIS:ND1	1:B:812:TYR:HA	2.31	0.46
2:C:161:PHE:CD1	2:C:197:ILE:HD12	2.51	0.46
2:D:139:ASN:O	2:D:140:LEU:C	2.58	0.46
1:A:1097:PHE:CZ	1:A:1105:MET:HG2	2.50	0.46
1:A:1121:LYS:HD3	1:A:1122:ARG:H	1.81	0.46
1:B:226:PHE:CD1	1:B:226:PHE:N	2.84	0.46
1:B:466:GLN:H	1:B:466:GLN:NE2	2.07	0.46
1:A:234:GLN:O	1:A:235:GLU:CG	2.63	0.46
1:A:745:THR:HG23	1:A:782:PHE:CE1	2.51	0.46
1:A:750:THR:CG2	1:A:751:ALA:H	2.17	0.46
1:B:308:THR:OG1	1:B:309:SER:N	2.38	0.46
1:B:450:GLY:C	1:B:479:VAL:CG2	2.89	0.46
1:B:683:ASN:HA	1:B:688:PRO:O	2.14	0.46
1:B:790:ASN:HA	1:B:807:PHE:CD1	2.51	0.46
1:B:1105:MET:CE	1:B:1126:ALA:HB1	2.31	0.46
2:D:43:ILE:HG23	2:D:43:ILE:O	2.15	0.46
1:B:59:GLY:HA2	1:B:1073:TRP:CZ3	2.50	0.46
1:B:63:VAL:CB	1:B:80:LEU:HB3	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:314:LEU:HD12	1:B:314:LEU:C	2.40	0.46
1:B:342:GLU:C	1:B:344:GLY:N	2.73	0.46
1:B:518:TYR:CZ	1:B:571:LEU:HD11	2.50	0.46
1:B:983:ALA:O	1:B:985:THR:N	2.44	0.46
1:B:1002:GLU:HB3	1:B:1032:THR:CG2	2.45	0.46
1:A:429:PHE:O	1:A:430:VAL:C	2.56	0.46
1:A:587:ILE:HD13	1:A:587:ILE:H	1.80	0.46
1:B:142:VAL:O	1:B:154:ALA:HB1	2.15	0.46
1:B:492:GLU:O	1:B:493:PRO:C	2.59	0.46
1:B:881:LEU:CD2	1:B:921:ILE:HD12	2.46	0.46
1:B:984:THR:HG22	1:B:984:THR:O	2.15	0.46
1:A:665:LYS:HB3	1:A:1138:ARG:NH2	2.31	0.46
1:A:938:MET:HE3	1:B:627:LYS:HA	1.97	0.46
1:A:1098:LEU:HD11	1:A:1133:VAL:HG12	1.97	0.46
1:B:311:ALA:HB2	1:B:324:VAL:HG13	1.98	0.46
1:B:414:ARG:HG2	1:B:414:ARG:HH11	1.81	0.46
1:B:447:GLU:O	1:B:448:LEU:HD12	2.15	0.46
1:B:548:ASP:O	1:B:549:SER:C	2.59	0.46
1:B:662:SER:HB2	1:B:1138:ARG:HH21	1.79	0.46
1:B:1014:MET:CG	1:B:1015:GLN:H	2.28	0.46
2:D:17:ILE:O	2:D:17:ILE:HG22	2.16	0.46
2:D:28:THR:HA	2:D:31:GLN:HE21	1.80	0.46
2:D:52:THR:OG1	2:D:85:ILE:HA	2.15	0.46
1:A:234:GLN:O	1:A:235:GLU:CB	2.64	0.46
1:A:269:SER:O	1:A:284:LEU:HA	2.15	0.46
1:A:594:THR:HG23	1:A:595:THR:H	1.80	0.46
1:B:124:ILE:HG12	1:B:131:ILE:CD1	2.46	0.46
1:B:289:GLU:OE2	1:B:295:VAL:HG12	2.16	0.46
2:D:149:ARG:O	2:D:150:GLU:O	2.33	0.46
2:D:171:HIS:HA	2:D:193:SER:H	1.81	0.46
2:D:206:CYS:SG	2:D:208:CYS:O	2.74	0.46
1:A:131:ILE:HG22	1:A:133:LEU:HD13	1.98	0.45
1:A:910:MET:HE2	1:A:912:LEU:HD21	1.96	0.45
1:B:905:HIS:CD2	1:B:933:LEU:HD21	2.50	0.45
1:B:1048:TYR:CE2	1:B:1052:LEU:HD12	2.51	0.45
2:C:160:ASP:CG	2:C:161:PHE:N	2.72	0.45
2:D:142:THR:O	2:D:143:ARG:C	2.59	0.45
2:D:208:CYS:O	2:D:208:CYS:SG	2.75	0.45
1:A:334:VAL:HG22	1:A:349:ALA:HA	1.98	0.45
1:B:412:PRO:HB2	1:B:422:TYR:CD2	2.51	0.45
1:B:422:TYR:HD1	1:B:422:TYR:H	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:426:VAL:HG22	1:B:435:VAL:HG13	1.99	0.45
1:B:706:GLU:O	1:B:707:ILE:CB	2.64	0.45
1:B:947:ARG:C	1:B:992:LEU:HD12	2.41	0.45
1:B:994:GLU:CG	1:B:995:VAL:H	2.29	0.45
1:A:18:CYS:N	1:A:313:CYS:SG	2.89	0.45
1:A:396:ILE:HD13	1:A:396:ILE:N	2.11	0.45
1:A:576:LEU:HD22	1:A:578:HIS:N	2.31	0.45
1:A:652:CYS:HB3	1:A:676:VAL:O	2.17	0.45
1:A:809:GLN:O	1:A:810:ASN:HB2	2.16	0.45
1:A:892:GLU:O	1:A:899:VAL:HA	2.16	0.45
1:B:6:VAL:HG22	1:B:1088:PHE:HD2	1.80	0.45
1:B:23:PHE:N	1:B:30:ASN:ND2	2.53	0.45
1:B:52:VAL:CG2	1:B:53:LYS:N	2.80	0.45
1:B:1029:LEU:HD23	1:B:1039:LEU:HD13	1.97	0.45
2:C:97:PRO:HA	2:C:202:ARG:HG2	1.97	0.45
2:D:100:ASN:HB3	2:D:103:LEU:HD12	1.97	0.45
1:A:130:MET:HE2	1:A:197:LEU:HD21	1.98	0.45
1:A:596:PHE:HB3	1:A:661:SER:HB2	1.98	0.45
1:B:5:TYR:HE2	1:B:7:VAL:HG21	1.82	0.45
1:B:250:PRO:O	1:B:252:ILE:N	2.49	0.45
1:B:585:GLU:CD	1:B:585:GLU:N	2.74	0.45
2:D:172:ARG:NH2	2:D:191:ASN:HD22	2.14	0.45
1:A:166:ASP:HB3	1:A:219:VAL:HG23	1.98	0.45
1:B:424:THR:HG22	1:B:425:LEU:N	2.32	0.45
1:B:768:SER:C	1:B:769:LYS:HE2	2.41	0.45
1:B:1110:ALA:C	1:B:1112:LEU:H	2.25	0.45
2:C:35:THR:CG2	2:C:36:SER:O	2.33	0.45
1:A:410:LEU:N	1:A:410:LEU:CD2	2.80	0.45
1:A:864:LYS:HE2	1:A:891:TYR:CE2	2.49	0.45
1:B:263:ARG:HB2	1:B:271:TYR:CE2	2.51	0.45
1:B:539:ALA:HB2	1:B:561:TRP:CD1	2.51	0.45
1:B:554:PRO:C	1:B:571:LEU:HB3	2.42	0.45
1:B:690:SER:O	1:B:691:LEU:HD12	2.16	0.45
1:B:853:TYR:HB2	1:B:858:LEU:HD23	1.99	0.45
2:C:50:LEU:O	2:C:143:ARG:HB2	2.17	0.45
1:A:520:GLN:HG3	1:A:529:ILE:CD1	2.47	0.45
1:B:10:GLN:NE2	1:B:11:LYS:N	2.64	0.45
1:B:196:SER:O	1:B:200:LYS:HA	2.16	0.45
1:B:317:LEU:HD12	1:B:321:VAL:HG12	1.99	0.45
1:B:402:ILE:HD13	1:B:699:LEU:HD12	1.99	0.45
2:C:89:ASP:OD1	2:C:90:ASP:N	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:161:PHE:CE1	2:C:197:ILE:HG23	2.51	0.45
2:D:109:PRO:HB2	2:D:203:ARG:HH21	1.81	0.45
2:D:168:GLY:HA3	2:D:208:CYS:SG	2.55	0.45
1:A:308:THR:O	1:A:383:LYS:NZ	2.49	0.45
1:A:860:THR:HG22	1:A:860:THR:O	2.17	0.45
1:B:29:LEU:HG	1:B:44:VAL:HG21	1.99	0.45
1:B:397:HIS:O	1:B:702:GLY:HA3	2.16	0.45
1:B:569:LEU:CD2	1:B:576:LEU:HA	2.46	0.45
1:B:732:CYS:HB2	1:B:794:ILE:O	2.17	0.45
1:B:1066:GLY:O	1:B:1067:LYS:HB2	2.16	0.45
1:A:582:LEU:HD12	1:A:582:LEU:C	2.42	0.45
1:A:584:GLY:O	1:B:900:ARG:NH2	2.49	0.45
1:A:837:TYR:HB2	1:A:840:GLU:HG3	1.98	0.45
1:B:63:VAL:CG2	1:B:80:LEU:HD23	2.47	0.45
1:B:529:ILE:N	1:B:529:ILE:HD13	2.32	0.45
1:B:644:LEU:HD23	1:B:645:SER:H	1.81	0.45
2:D:17:ILE:HD11	2:D:139:ASN:HD22	1.80	0.45
2:D:42:THR:HG22	2:D:43:ILE:N	2.31	0.45
2:D:169:GLY:CA	2:D:211:CYS:HA	2.46	0.45
1:B:42:TYR:CD2	1:B:49:LEU:HB3	2.52	0.45
1:B:401:SER:C	1:B:402:ILE:HD12	2.41	0.45
1:B:430:VAL:C	1:B:431:GLY:O	2.52	0.45
1:B:451:PHE:HB2	1:B:486:LEU:HD13	1.98	0.45
1:B:1127:ASP:HA	1:B:1130:ILE:HD12	1.98	0.45
1:A:16:ASN:CG	1:A:35:LYS:O	2.51	0.44
1:A:304:LEU:HD12	1:A:305:LEU:H	1.82	0.44
1:A:487:VAL:CG2	1:A:524:GLN:HA	2.46	0.44
1:A:587:ILE:H	1:A:587:ILE:CD1	2.30	0.44
1:B:37:THR:HG22	1:B:59:GLY:O	2.18	0.44
1:B:63:VAL:HG21	1:B:80:LEU:HD23	1.98	0.44
1:B:81:THR:OG1	1:B:85:ASN:HB2	2.16	0.44
1:B:192:THR:CB	1:B:206:PRO:HD2	2.47	0.44
1:B:392:ASN:ND2	1:B:392:ASN:C	2.75	0.44
2:C:109:PRO:CG	2:C:203:ARG:NH1	2.80	0.44
2:C:147:GLU:CG	2:C:172:ARG:HG3	2.47	0.44
1:A:546:LEU:HD11	1:A:593:MET:HB3	1.99	0.44
1:A:762:SER:HB3	1:A:803:HIS:ND1	2.32	0.44
1:A:771:PHE:CD1	1:A:835:MET:HE2	2.52	0.44
1:A:865:GLU:HG2	1:A:866:VAL:N	2.32	0.44
1:B:139:LEU:HD22	1:B:156:ASN:HB3	1.99	0.44
1:B:384:GLU:OE2	1:B:384:GLU:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:894:THR:CG2	1:B:895:THR:N	2.78	0.44
2:C:33:THR:HG22	2:C:35:THR:H	1.81	0.44
2:C:98:ILE:HG13	2:C:189:TRP:CZ2	2.53	0.44
1:A:518:TYR:C	1:A:518:TYR:CD2	2.95	0.44
1:A:582:LEU:O	1:A:583:GLY:O	2.35	0.44
1:A:808:LEU:HD12	1:A:835:MET:HE1	1.99	0.44
1:B:10:GLN:HE21	1:B:11:LYS:N	2.16	0.44
1:B:538:VAL:HG22	1:B:558:ILE:HD11	1.98	0.44
2:D:116:ASP:O	2:D:182:ASP:CB	2.62	0.44
1:A:282:MET:CG	1:A:305:LEU:HD11	2.44	0.44
1:A:346:TYR:CD1	1:A:346:TYR:N	2.85	0.44
1:B:573:SER:O	1:B:574:PHE:CB	2.66	0.44
2:C:113:THR:HA	2:C:124:SER:O	2.17	0.44
1:A:738:SER:OG	1:A:787:GLU:HG2	2.17	0.44
1:A:1121:LYS:HZ2	1:A:1121:LYS:HA	1.83	0.44
1:B:124:ILE:HG12	1:B:131:ILE:HD12	1.99	0.44
2:C:21:LEU:O	2:C:22:ASN:C	2.61	0.44
2:C:103:LEU:O	2:C:104:GLY:C	2.61	0.44
2:D:47:VAL:CG1	2:D:48:THR:N	2.80	0.44
1:A:7:VAL:HG13	1:A:1091:GLY:HA3	2.00	0.44
1:A:69:PRO:HD2	1:A:72:GLU:HG3	1.98	0.44
1:A:874:VAL:HG13	1:A:881:LEU:HB3	2.00	0.44
1:B:31:LEU:C	1:B:32:LEU:HD12	2.43	0.44
1:B:704:ILE:H	1:B:704:ILE:CD1	2.29	0.44
1:B:984:THR:O	1:B:986:ASP:N	2.51	0.44
2:C:102:LEU:O	2:C:104:GLY:N	2.50	0.44
1:A:704:ILE:HG23	1:A:705:ASP:N	2.32	0.44
1:B:222:VAL:CG1	1:B:223:PRO:HD2	2.47	0.44
1:B:342:GLU:O	1:B:344:GLY:N	2.51	0.44
2:C:119:GLY:O	2:C:120:LYS:CB	2.66	0.44
1:A:29:LEU:HG	1:A:44:VAL:CG2	2.47	0.44
1:A:291:MET:HG3	1:A:292:ASP:N	2.29	0.44
1:A:931:LEU:HD12	1:A:947:ARG:HH22	1.83	0.44
1:B:47:GLU:HG2	1:B:48:GLY:N	2.25	0.44
1:B:246:LEU:HD11	1:B:299:ASP:HA	1.99	0.44
1:B:286:GLU:O	1:B:298:LYS:N	2.45	0.44
1:B:416:ASP:HA	1:B:417:PRO:HD3	1.86	0.44
1:B:482:GLU:HB2	1:B:483:PRO:CD	2.32	0.44
1:B:482:GLU:CB	1:B:483:PRO:CD	2.92	0.44
2:D:147:GLU:HA	2:D:148:PRO:HD3	1.83	0.44
1:A:663:ASN:O	1:A:664:HIS:CB	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1007:PHE:CD2	1:A:1030:PHE:HB3	2.53	0.44
1:B:140:PHE:CZ	1:B:178:ILE:HD12	2.53	0.44
1:B:644:LEU:CG	1:B:645:SER:N	2.81	0.44
1:B:1080:ARG:HG3	1:B:1081:LYS:N	2.32	0.44
2:C:89:ASP:OD2	2:C:202:ARG:NH2	2.51	0.44
2:C:102:LEU:C	2:C:104:GLY:N	2.75	0.44
2:D:172:ARG:NE	2:D:174:GLU:OE2	2.50	0.44
1:A:275:ASP:HB3	1:A:279:ARG:N	2.30	0.43
1:A:587:ILE:HD13	1:A:587:ILE:N	2.32	0.43
1:B:376:VAL:HA	1:B:388:ARG:O	2.18	0.43
1:B:616:LEU:HD12	1:B:617:ASN:H	1.80	0.43
2:C:52:THR:HG21	2:C:85:ILE:HA	2.00	0.43
1:A:1:MET:HA	1:A:1:MET:CE	2.48	0.43
1:A:23:PHE:CE2	1:A:91:TYR:HB2	2.53	0.43
1:A:78:PHE:O	1:A:79:ILE:HG12	2.18	0.43
1:A:448:LEU:O	1:A:449:MET:C	2.60	0.43
1:A:454:ASP:C	1:A:455:GLN:HG2	2.41	0.43
1:A:480:SER:HB3	1:A:487:VAL:CG1	2.46	0.43
1:A:705:ASP:OD2	1:A:709:LYS:CE	2.59	0.43
1:A:734:GLY:HA3	1:A:829:PHE:CE1	2.53	0.43
1:B:130:MET:HA	1:B:145:LEU:HB2	2.00	0.43
1:B:192:THR:HB	1:B:206:PRO:HD2	2.00	0.43
1:B:358:PRO:HA	1:B:1033:VAL:O	2.18	0.43
1:B:1115:ASP:HB2	1:B:1120:MET:HB2	2.00	0.43
1:A:90:GLU:HB3	1:A:101:ILE:HG13	2.00	0.43
1:A:405:PRO:HA	1:A:697:SER:HA	2.00	0.43
1:A:516:LEU:HD23	1:A:574:PHE:CE2	2.53	0.43
1:B:9:ALA:HB3	1:B:1037:ILE:HG22	2.01	0.43
1:B:81:THR:HG22	1:B:82:ALA:N	2.34	0.43
1:B:261:HIS:ND1	1:B:261:HIS:C	2.76	0.43
1:B:514:ARG:O	1:B:514:ARG:CG	2.63	0.43
1:B:843:PRO:HG2	2:D:24:VAL:HG21	2.00	0.43
2:D:148:PRO:O	2:D:149:ARG:C	2.61	0.43
1:A:177:THR:HG22	1:A:194:GLU:HA	2.00	0.43
1:A:744:ASP:HA	1:A:782:PHE:CE1	2.53	0.43
1:A:936:LYS:HB3	1:A:939:GLU:HB2	2.00	0.43
1:B:112:ILE:N	1:B:112:ILE:CD1	2.78	0.43
1:B:150:LYS:HB2	1:B:151:GLU:OE2	2.18	0.43
1:B:570:LYS:HE2	1:B:577:LEU:HD11	2.00	0.43
1:B:694:ALA:HA	1:B:698:THR:O	2.18	0.43
1:B:782:PHE:N	1:B:782:PHE:CD2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1115:ASP:HA	1:B:1120:MET:HB3	2.00	0.43
2:D:115:LEU:CD1	2:D:130:VAL:HG13	2.48	0.43
1:A:679:MET:SD	1:A:680:CYS:N	2.92	0.43
1:A:1032:THR:CG2	1:A:1034:ASN:H	2.23	0.43
1:A:1039:LEU:HD12	1:A:1040:VAL:H	1.83	0.43
1:B:263:ARG:HG2	1:B:263:ARG:HH11	1.83	0.43
1:B:543:ILE:N	1:B:543:ILE:HD13	2.33	0.43
1:B:874:VAL:HG22	1:B:875:GLU:O	2.18	0.43
1:B:903:CYS:SG	1:B:941:ASN:HA	2.59	0.43
2:D:211:CYS:HA	2:D:212:PRO:HD2	1.81	0.43
1:A:762:SER:CB	1:A:803:HIS:ND1	2.82	0.43
1:A:931:LEU:HD12	1:A:947:ARG:NH2	2.33	0.43
1:B:222:VAL:HA	1:B:223:PRO:HD3	1.82	0.43
1:B:237:ILE:HD11	1:B:253:ILE:HD11	2.00	0.43
2:C:145:ILE:HD11	2:C:174:GLU:OE2	2.18	0.43
1:A:614:PHE:CD1	1:A:614:PHE:N	2.86	0.43
1:B:248:ILE:O	1:B:250:PRO:HD3	2.19	0.43
1:B:728:GLU:O	1:B:730:SER:N	2.51	0.43
1:B:740:ILE:HD12	1:B:740:ILE:H	1.82	0.43
1:B:832:GLY:N	1:B:873:MET:CE	2.82	0.43
1:A:34:ALA:HB2	1:A:64:MET:HE1	2.00	0.43
1:A:58:TYR:HB3	1:A:1073:TRP:HB2	2.01	0.43
1:A:522:HIS:HB3	1:A:523:PRO:CD	2.49	0.43
1:A:532:THR:CG2	1:A:533:GLU:N	2.81	0.43
1:A:948:ASP:N	1:A:992:LEU:HD11	2.33	0.43
1:B:45:THR:O	1:B:46:ALA:C	2.61	0.43
1:B:155:PHE:HE1	1:B:157:ILE:HD11	1.83	0.43
1:B:292:ASP:C	1:B:294:THR:H	2.27	0.43
1:B:518:TYR:OH	1:B:571:LEU:HD11	2.18	0.43
2:C:143:ARG:HH11	2:C:143:ARG:HG3	1.84	0.43
2:D:80:ARG:HB2	2:D:81:PRO:CD	2.36	0.43
1:A:10:GLN:HG2	1:A:710:LEU:HD12	1.99	0.43
1:A:518:TYR:CE1	1:A:571:LEU:HD22	2.53	0.43
1:B:170:LEU:HD11	1:B:179:CYS:HB2	2.00	0.43
1:B:191:LYS:HD3	1:B:193:TYR:CE2	2.54	0.43
1:B:226:PHE:HB2	1:B:227:GLY:H	1.65	0.43
1:B:281:PHE:O	1:B:305:LEU:HD12	2.18	0.43
1:B:375:LEU:HD23	1:B:375:LEU:HA	1.85	0.43
1:B:380:GLY:O	1:B:381:ALA:HB2	2.18	0.43
1:B:452:VAL:HG22	1:B:453:ASP:N	2.34	0.43
1:B:463:VAL:HG23	1:B:467:GLN:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:172:ARG:HH22	2:C:195:SER:C	2.27	0.43
2:D:44:PRO:HA	2:D:45:PRO:HD3	1.94	0.43
2:D:89:ASP:O	2:D:90:ASP:O	2.37	0.43
2:D:192:PRO:CG	2:D:206:CYS:HB2	2.48	0.43
2:D:218:CYS:CB	2:D:221:ASP:OD1	2.67	0.43
1:A:295:VAL:HG23	1:A:295:VAL:O	2.18	0.43
1:A:504:ASN:OD1	1:A:507:GLN:HG3	2.18	0.43
1:A:946:ALA:HB2	1:A:989:ARG:O	2.19	0.43
1:A:1032:THR:HG22	1:A:1035:GLY:N	2.34	0.43
1:B:46:ALA:HB3	1:B:47:GLU:OE1	2.19	0.43
1:B:194:GLU:OE2	1:B:204:LYS:O	2.36	0.43
1:B:432:GLN:C	1:B:433:THR:OG1	2.61	0.43
1:B:563:ASP:O	1:B:564:ILE:C	2.60	0.43
1:B:894:THR:HG22	1:B:895:THR:H	1.82	0.43
1:B:919:ASP:O	1:B:934:ALA:HA	2.19	0.43
1:B:948:ASP:N	1:B:992:LEU:HD12	2.33	0.43
1:B:1109:VAL:O	1:B:1110:ALA:O	2.37	0.43
1:A:370:GLN:O	1:A:372:GLN:N	2.52	0.42
1:A:391:ARG:HD2	1:A:392:ASN:O	2.19	0.42
1:A:1097:PHE:CZ	1:A:1105:MET:CG	3.02	0.42
1:B:183:GLN:HG2	1:B:184:ASP:N	2.34	0.42
1:B:275:ASP:HB2	1:B:279:ARG:N	2.25	0.42
1:B:355:ASN:O	1:B:357:GLY:N	2.52	0.42
1:B:682:LEU:HD13	1:B:682:LEU:C	2.44	0.42
1:B:843:PRO:HG2	2:D:24:VAL:CG2	2.49	0.42
1:B:1108:VAL:HG12	1:B:1109:VAL:H	1.84	0.42
2:C:38:LEU:O	2:C:39:GLY:C	2.60	0.42
2:C:100:ASN:HB3	2:C:103:LEU:CG	2.49	0.42
2:D:172:ARG:NH1	2:D:197:ILE:HG12	2.34	0.42
2:D:173:ARG:HH12	2:D:218:CYS:CB	2.31	0.42
1:A:403:ASP:HA	1:A:698:THR:HG22	2.02	0.42
1:A:576:LEU:HD22	1:A:577:LEU:N	2.34	0.42
1:A:745:THR:O	1:A:747:GLY:N	2.50	0.42
1:A:912:LEU:HB2	1:A:913:TYR:CD1	2.54	0.42
1:B:129:ARG:HH11	1:B:176:PRO:HD3	1.81	0.42
1:B:161:GLU:N	1:B:161:GLU:CD	2.77	0.42
1:B:1029:LEU:CD2	1:B:1039:LEU:HD13	2.49	0.42
1:A:127:GLU:O	1:A:128:CYS:HB2	2.20	0.42
1:A:731:GLN:HA	1:A:796:GLN:NE2	2.34	0.42
1:A:780:THR:HB	1:A:784:GLU:HG3	2.01	0.42
1:B:181:VAL:HG23	1:B:219:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:553:SER:HA	1:B:554:PRO:HD3	1.82	0.42
1:B:655:ARG:NH1	1:B:655:ARG:HG2	2.35	0.42
2:C:145:ILE:HA	2:C:145:ILE:HD13	1.74	0.42
2:D:127:TYR:CE1	2:D:131:LYS:HD3	2.54	0.42
1:A:570:LYS:HD2	1:A:570:LYS:HA	1.66	0.42
1:A:660:TYR:CE2	1:A:708:GLN:OE1	2.72	0.42
1:A:705:ASP:O	1:A:706:GLU:C	2.63	0.42
1:A:866:VAL:HA	1:A:867:LYS:NZ	2.34	0.42
1:A:970:ASN:OD1	1:A:970:ASN:C	2.62	0.42
1:B:19:VAL:HG22	1:B:20:THR:N	2.33	0.42
1:B:130:MET:HG2	1:B:197:LEU:HD11	2.01	0.42
1:B:130:MET:HA	1:B:145:LEU:HB3	2.01	0.42
1:B:1059:ASN:HD21	1:B:1070:HIS:CD2	2.36	0.42
2:C:48:THR:HG22	2:C:83:ILE:O	2.18	0.42
1:A:296:THR:OG1	1:A:297:LEU:N	2.53	0.42
1:A:811:GLU:OE2	1:A:847:ARG:NE	2.53	0.42
1:A:867:LYS:HD2	1:A:867:LYS:N	2.32	0.42
1:A:1032:THR:HG23	1:A:1034:ASN:N	2.25	0.42
1:B:235:GLU:HB2	1:B:254:LYS:HE3	2.00	0.42
1:B:308:THR:OG1	1:B:324:VAL:HG11	2.19	0.42
1:B:324:VAL:HB	1:B:332:GLN:HG2	2.02	0.42
1:B:407:ILE:HG22	1:B:408:LYS:N	2.35	0.42
1:B:414:ARG:NH2	1:B:462:ASN:HB2	2.34	0.42
1:B:516:LEU:HD11	1:B:538:VAL:HG21	2.01	0.42
1:B:603:LEU:N	1:B:603:LEU:HD23	2.35	0.42
1:B:662:SER:HB3	1:B:1138:ARG:HH21	1.85	0.42
1:B:1030:PHE:O	1:B:1037:ILE:HA	2.19	0.42
1:A:305:LEU:HD13	1:A:336:LEU:HD22	2.00	0.42
1:A:549:SER:OG	1:A:550:ASN:N	2.53	0.42
1:A:876:PHE:CD1	1:A:916:THR:HG21	2.55	0.42
1:A:1053:ASP:O	1:A:1057:ARG:HG3	2.20	0.42
1:B:130:MET:CE	1:B:195:VAL:HG11	2.50	0.42
1:B:407:ILE:H	1:B:407:ILE:CD1	2.28	0.42
1:B:458:PHE:HE2	1:B:499:SER:O	2.02	0.42
1:B:818:SER:HA	1:B:828:TYR:O	2.19	0.42
2:C:113:THR:HB	2:C:186:VAL:HB	2.00	0.42
2:D:177:ILE:HG12	2:D:186:VAL:HG22	2.02	0.42
1:A:910:MET:HG2	1:A:912:LEU:HD21	2.01	0.42
1:A:1000:LEU:HD13	1:A:1002:GLU:HB2	2.00	0.42
1:B:162:LEU:HG	1:B:163:HIS:N	2.34	0.42
1:B:182:TYR:CE1	1:B:189:HIS:HD2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:412:PRO:HD3	1:B:680:CYS:HB2	2.02	0.42
1:B:463:VAL:HG11	1:B:469:ILE:HB	2.01	0.42
1:B:1017:LEU:C	1:B:1019:GLU:N	2.78	0.42
1:B:388:ARG:C	1:B:389:ILE:HD12	2.45	0.42
1:A:170:LEU:HD13	1:A:207:TRP:CH2	2.55	0.42
1:A:854:SER:O	1:A:855:ASP:HB2	2.19	0.42
1:A:1086:THR:C	1:A:1088:PHE:H	2.28	0.42
1:B:4:ASN:ND2	1:B:976:VAL:HG11	2.34	0.42
1:B:43:VAL:HG23	1:B:52:VAL:CG1	2.47	0.42
1:B:394:ILE:HG13	1:B:669:SER:HB3	2.00	0.42
1:B:467:GLN:CB	1:B:478:LEU:HD21	2.49	0.42
1:B:724:ILE:HD11	1:B:733:PHE:CD2	2.54	0.42
2:D:215:CYS:C	2:D:217:GLU:H	2.27	0.42
1:A:177:THR:HG22	1:A:194:GLU:HG2	2.01	0.42
1:A:964:ASN:OD1	1:A:978:GLN:HG3	2.20	0.42
1:B:451:PHE:HD1	1:B:486:LEU:HD22	1.85	0.42
1:B:915:LYS:HD3	1:B:915:LYS:HA	1.84	0.42
2:D:22:ASN:O	2:D:25:GLU:N	2.50	0.42
1:A:369:ARG:C	1:A:370:GLN:OE1	2.63	0.41
1:A:550:ASN:C	1:A:552:LEU:H	2.27	0.41
1:A:816:LEU:C	1:A:817:VAL:HG12	2.45	0.41
1:B:235:GLU:O	1:B:236:SER:CB	2.68	0.41
1:B:262:ASN:HD21	1:B:316:TYR:H	1.67	0.41
1:B:381:ALA:O	1:B:382:PHE:HB2	2.20	0.41
1:B:437:MET:HB2	1:B:446:THR:CG2	2.49	0.41
1:B:503:CYS:HB2	1:B:508:VAL:HG22	2.02	0.41
1:B:613:TYR:CZ	1:B:627:LYS:HB2	2.55	0.41
2:D:128:LYS:O	2:D:129:GLY:C	2.62	0.41
1:A:173:CYS:C	1:A:175:ALA:N	2.76	0.41
1:A:410:LEU:HA	1:A:426:VAL:O	2.20	0.41
1:A:1113:GLN:CB	1:A:1121:LYS:HD2	2.49	0.41
1:A:1114:TYR:CE2	1:A:1128:ASP:HB3	2.56	0.41
1:B:63:VAL:O	1:B:79:ILE:HA	2.19	0.41
1:B:130:MET:CG	1:B:197:LEU:HD11	2.51	0.41
1:B:361:ASP:OD2	1:B:723:LYS:HD3	2.20	0.41
1:B:396:ILE:CD1	1:B:673:LEU:HD11	2.42	0.41
1:B:932:LEU:CD2	1:B:979:LYS:HD3	2.50	0.41
1:B:1063:LYS:HG3	1:B:1063:LYS:O	2.20	0.41
2:C:221:ASP:O	2:C:222:THR:HG23	2.20	0.41
1:A:72:GLU:CD	1:A:103:ARG:HH22	2.29	0.41
1:A:416:ASP:C	1:A:416:ASP:OD2	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:416:ASP:CG	1:A:419:ARG:HG3	2.44	0.41
1:A:982:ALA:O	1:A:984:THR:N	2.50	0.41
1:B:167:VAL:O	1:B:168:LYS:HE2	2.20	0.41
1:B:250:PRO:C	1:B:252:ILE:N	2.78	0.41
1:B:399:HIS:HB2	1:B:701:ILE:O	2.20	0.41
1:B:910:MET:HE2	1:B:926:LEU:HD22	2.02	0.41
1:B:1058:LEU:HD23	1:B:1093:LEU:CD2	2.48	0.41
1:B:1115:ASP:CB	1:B:1120:MET:HB2	2.50	0.41
1:A:391:ARG:HB3	1:A:391:ARG:HH11	1.85	0.41
1:A:494:GLN:O	1:A:495:ALA:HB3	2.19	0.41
1:A:597:GLU:HG3	1:A:661:SER:CB	2.50	0.41
1:A:818:SER:O	1:A:819:CYS:HB3	2.20	0.41
1:B:29:LEU:HD23	1:B:44:VAL:HG11	2.01	0.41
1:B:582:LEU:HD12	1:B:582:LEU:C	2.46	0.41
1:B:754:PRO:HB2	1:B:759:GLN:OE1	2.20	0.41
2:C:111:THR:HB	2:C:188:GLU:CG	2.50	0.41
2:C:112:GLN:HE22	2:C:187:THR:CG2	2.15	0.41
2:C:170:PHE:HB2	2:C:193:SER:OG	2.20	0.41
2:D:49:GLY:HA2	2:D:144:PHE:CD2	2.56	0.41
1:A:222:VAL:HA	1:A:223:PRO:HD3	1.83	0.41
1:B:199:GLU:HG3	1:B:201:GLU:CD	2.46	0.41
1:B:203:ASN:O	1:B:204:LYS:HB2	2.21	0.41
1:B:483:PRO:O	1:B:484:LYS:CB	2.69	0.41
1:B:644:LEU:H	1:B:644:LEU:CD2	2.32	0.41
1:A:81:THR:HG21	1:A:85:ASN:OD1	2.21	0.41
1:A:90:GLU:OE1	1:A:103:ARG:NE	2.53	0.41
1:A:357:GLY:HA2	1:A:358:PRO:C	2.46	0.41
1:A:362:MET:HB3	1:A:377:THR:HG22	2.03	0.41
1:A:982:ALA:C	1:A:984:THR:N	2.77	0.41
1:A:1013:VAL:HG12	1:A:1014:MET:O	2.21	0.41
1:B:433:THR:OG1	1:B:455:GLN:O	2.24	0.41
1:B:617:ASN:O	1:B:621:GLY:N	2.52	0.41
2:C:216:SER:HA	2:C:219:GLU:CD	2.45	0.41
2:D:113:THR:C	2:D:114:VAL:HG23	2.46	0.41
2:D:147:GLU:OE2	2:D:163:ARG:CZ	2.69	0.41
1:A:372:GLN:NE2	1:A:372:GLN:O	2.53	0.41
1:A:388:ARG:CD	1:A:714:THR:HB	2.46	0.41
1:B:459:PHE:HE2	1:B:503:CYS:SG	2.44	0.41
1:B:1022:THR:O	1:B:1024:THR:N	2.54	0.41
2:D:48:THR:HA	2:D:82:LYS:O	2.21	0.41
1:A:7:VAL:HG11	1:A:1095:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:847:ARG:NH1	1:A:849:VAL:HG22	2.35	0.41
1:B:383:LYS:CG	1:B:384:GLU:OE2	2.69	0.41
1:B:473:SER:O	1:B:497:ASN:HA	2.21	0.41
1:B:474:ALA:O	1:B:475:SER:CB	2.67	0.41
1:B:886:SER:C	1:B:908:ASN:HD21	2.29	0.41
2:C:215:CYS:SG	2:C:217:GLU:N	2.84	0.41
1:A:16:ASN:HB2	1:A:35:LYS:O	2.21	0.41
1:A:125:ASP:OD1	1:A:126:PRO:HD2	2.21	0.41
1:A:181:VAL:HG23	1:A:219:VAL:CG2	2.50	0.41
1:A:358:PRO:HD2	1:A:380:GLY:HA2	2.03	0.41
1:A:622:LEU:HD23	1:A:622:LEU:H	1.86	0.41
1:A:634:GLN:O	1:A:635:PRO:C	2.63	0.41
1:A:725:CYS:SG	1:A:817:VAL:HA	2.60	0.41
1:A:889:ARG:HD2	1:A:901:THR:CG2	2.51	0.41
1:B:277:GLU:HB3	1:B:279:ARG:NH1	2.35	0.41
1:B:287:LYS:HD3	1:B:287:LYS:O	2.20	0.41
1:B:318:ASP:O	1:B:319:ASN:HB2	2.20	0.41
1:B:408:LYS:HG3	1:B:430:VAL:HG23	2.03	0.41
1:B:436:LEU:HD11	1:B:443:VAL:O	2.20	0.41
1:B:724:ILE:HD11	1:B:733:PHE:HD2	1.86	0.41
1:B:809:GLN:O	1:B:835:MET:HE1	2.21	0.41
1:B:869:ALA:N	1:B:885:ASN:OD1	2.51	0.41
1:B:933:LEU:HD23	1:B:944:GLU:HA	2.02	0.41
1:B:1039:LEU:CD2	1:B:1139:ILE:HG22	2.50	0.41
2:C:110:SER:N	2:C:221:ASP:HB3	2.35	0.41
2:D:82:LYS:HE2	2:D:161:PHE:CZ	2.56	0.41
1:A:18:CYS:HA	1:A:32:LEU:O	2.21	0.41
1:A:224:GLU:O	1:A:225:PRO:C	2.63	0.41
1:A:226:PHE:CD1	1:A:226:PHE:N	2.89	0.41
1:A:537:GLU:HG3	1:A:561:TRP:CD1	2.56	0.41
1:A:730:SER:HB2	1:A:732:CYS:SG	2.61	0.41
1:A:841:ALA:HA	2:C:45:PRO:HG2	2.02	0.41
1:B:450:GLY:CA	1:B:479:VAL:HG11	2.27	0.41
1:B:570:LYS:C	1:B:572:PRO:HD2	2.46	0.41
1:B:676:VAL:HG22	1:B:693:LEU:HD12	2.03	0.41
1:B:836:VAL:HG13	2:D:22:ASN:OD1	2.21	0.41
1:B:1108:VAL:C	1:B:1110:ALA:N	2.78	0.41
2:C:147:GLU:OE2	2:C:163:ARG:HD3	2.21	0.41
2:C:219:GLU:O	2:C:221:ASP:N	2.53	0.41
2:D:142:THR:O	2:D:143:ARG:O	2.39	0.41
1:A:90:GLU:HB3	1:A:101:ILE:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:439:ASN:O	1:A:440:GLY:C	2.65	0.40
1:A:676:VAL:HG11	1:A:693:LEU:HD22	2.03	0.40
1:B:5:TYR:CE2	1:B:7:VAL:HG21	2.56	0.40
1:B:213:GLU:OE1	1:B:234:GLN:O	2.38	0.40
1:B:456:GLN:O	1:B:472:THR:HB	2.21	0.40
1:B:706:GLU:OE1	1:B:706:GLU:C	2.65	0.40
1:A:22:HIS:CD2	1:A:28:ASP:O	2.74	0.40
1:A:125:ASP:HA	1:A:126:PRO:HD3	1.97	0.40
1:A:1109:VAL:O	1:A:1109:VAL:HG12	2.22	0.40
1:B:991:HIS:HB3	1:B:993:GLN:HE22	1.86	0.40
1:B:994:GLU:O	1:B:995:VAL:CG2	2.60	0.40
2:C:107:SER:O	2:C:109:PRO:HD2	2.21	0.40
1:A:263:ARG:HD2	1:A:265:ASP:O	2.22	0.40
1:A:439:ASN:O	1:A:442:GLU:N	2.47	0.40
1:A:439:ASN:O	1:A:441:GLU:N	2.55	0.40
1:A:542:ASP:HB3	1:A:557:ALA:HB3	2.03	0.40
1:B:2:SER:CB	1:B:995:VAL:HG23	2.51	0.40
1:B:254:LYS:HD2	1:B:254:LYS:N	2.36	0.40
1:B:740:ILE:HG22	1:B:741:GLU:N	2.36	0.40
1:B:949:PHE:CE1	1:B:991:HIS:CD2	3.10	0.40
1:B:1061:VAL:O	1:B:1062:ILE:C	2.64	0.40
1:A:484:LYS:O	1:A:485:ALA:HB2	2.22	0.40
1:A:568:ILE:O	1:A:569:LEU:HD23	2.20	0.40
1:A:607:GLY:HA2	1:A:635:PRO:HA	2.04	0.40
1:B:284:LEU:CD1	1:B:301:ARG:NH2	2.84	0.40
2:C:52:THR:HG21	2:C:85:ILE:CA	2.50	0.40
1:A:166:ASP:O	1:A:180:PHE:HB2	2.21	0.40
1:A:234:GLN:O	1:A:235:GLU:HG2	2.20	0.40
1:A:471:ILE:HG23	1:A:476:VAL:HB	2.04	0.40
1:A:492:GLU:OE2	1:A:494:GLN:N	2.54	0.40
1:A:611:LEU:C	1:A:611:LEU:CD2	2.89	0.40
1:A:837:TYR:HA	1:A:838:PRO:HD3	1.95	0.40
1:B:281:PHE:HB3	1:B:282:MET:H	1.67	0.40
1:B:378:CYS:SG	1:B:724:ILE:HB	2.60	0.40
1:B:447:GLU:C	1:B:448:LEU:HD12	2.46	0.40
1:B:507:GLN:NE2	1:B:552:LEU:HA	2.37	0.40
1:B:569:LEU:HD23	1:B:576:LEU:HA	2.03	0.40
1:B:1047:TRP:O	1:B:1048:TYR:C	2.62	0.40
1:B:1120:MET:HB2	1:B:1121:LYS:H	1.72	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	1126/1140 (99%)	960 (85%)	128 (11%)	38 (3%)	3	6
1	B	1130/1140 (99%)	892 (79%)	145 (13%)	93 (8%)	1	1
2	C	168/222 (76%)	123 (73%)	33 (20%)	12 (7%)	1	1
2	D	169/222 (76%)	115 (68%)	32 (19%)	22 (13%)	0	0
All	All	2593/2724 (95%)	2090 (81%)	338 (13%)	165 (6%)	1	1

All (165) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	254	LYS
1	A	269	SER
1	A	290	GLN
1	A	341	ASN
1	A	370	GLN
1	A	371	GLY
1	A	708	GLN
1	A	772	SER
1	A	781	SER
1	A	856	GLY
1	A	929	SER
1	B	46	ALA
1	B	223	PRO
1	B	275	ASP
1	B	310	ILE
1	B	341	ASN
1	B	357	GLY
1	B	430	VAL
1	B	434	ARG
1	B	450	GLY
1	B	466	GLN
1	B	493	PRO

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Mol	Chain	Res	Type
1	B	549	SER
1	B	551	GLY
1	B	576	LEU
1	B	688	PRO
1	B	707	ILE
1	B	751	ALA
1	B	782	PHE
1	B	985	THR
1	B	1015	GLN
1	B	1016	ASN
1	B	1021	SER
1	B	1065	VAL
1	B	1109	VAL
1	B	1110	ALA
2	C	39	GLY
2	C	108	THR
2	C	162	LYS
2	D	23	THR
2	D	51	LEU
2	D	89	ASP
2	D	90	ASP
2	D	104	GLY
2	D	108	THR
2	D	109	PRO
2	D	143	ARG
2	D	193	SER
2	D	209	HIS
1	A	118	THR
1	A	147	ARG
1	A	203	ASN
1	A	294	THR
1	A	449	MET
1	A	524	GLN
1	A	551	GLY
1	A	583	GLY
1	A	643	SER
1	A	646	THR
1	A	706	GLU
1	A	746	SER
1	A	983	ALA
1	A	987	GLU
1	B	26	ALA

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Mol	Chain	Res	Type
1	B	35	LYS
1	B	113	GLY
1	B	146	ASP
1	B	149	ASN
1	B	168	LYS
1	B	214	ALA
1	B	276	MET
1	B	318	ASP
1	B	369	ARG
1	B	451	PHE
1	B	524	GLN
1	B	564	ILE
1	B	626	ARG
1	B	729	VAL
1	B	748	GLY
1	B	986	ASP
1	B	995	VAL
1	B	1037	ILE
1	B	1066	GLY
1	B	1119	GLY
2	C	148	PRO
2	C	180	VAL
2	C	220	ARG
2	D	105	LEU
2	D	148	PRO
2	D	149	ARG
2	D	216	SER
1	A	367	LEU
1	A	368	GLU
1	A	817	VAL
1	A	1015	GLN
1	A	1027	SER
1	B	147	ARG
1	B	148	ASP
1	B	236	SER
1	B	343	GLN
1	B	432	GLN
1	B	433	THR
1	B	440	GLY
1	B	444	GLU
1	B	465	HIS
1	B	475	SER

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Mol	Chain	Res	Type
1	B	484	LYS
1	B	578	HIS
1	B	884	ILE
1	B	1080	ARG
2	C	103	LEU
2	C	107	SER
2	D	39	GLY
2	D	91	LYS
2	D	117	LEU
1	A	319	ASN
1	B	226	PHE
1	B	251	PRO
1	B	253	ILE
1	B	255	GLN
1	B	340	SER
1	B	706	GLU
1	B	761	LEU
1	B	783	GLY
1	B	864	LYS
1	B	918	GLY
1	B	984	THR
2	C	50	LEU
2	D	19	THR
2	D	99	PRO
1	A	184	ASP
1	A	224	GLU
1	A	440	GLY
1	A	937	PRO
1	B	47	GLU
1	B	203	ASN
1	B	208	LYS
1	B	241	ASN
1	B	243	ASP
1	B	356	LEU
1	B	381	ALA
1	B	572	PRO
1	B	575	GLU
1	B	643	SER
1	B	861	VAL
1	B	1036	MET
2	C	195	SER
2	D	212	PRO

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Mol	Chain	Res	Type
1	A	253	ILE
1	B	204	LYS
1	B	486	LEU
1	B	1111	ASN
2	D	192	PRO
1	A	584	GLY
1	B	513	GLY
1	B	822	GLY
2	C	164	GLY
2	D	180	VAL
1	B	571	LEU
1	B	1013	VAL
2	C	20	GLY
1	A	119	GLY
1	B	144	PRO
1	B	224	GLU
1	B	848	ILE

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	992/999 (99%)	897 (90%)	95 (10%)	7	13
1	B	994/999 (100%)	916 (92%)	78 (8%)	10	22
2	C	151/191 (79%)	130 (86%)	21 (14%)	3	5
2	D	151/191 (79%)	133 (88%)	18 (12%)	4	8
All	All	2288/2380 (96%)	2076 (91%)	212 (9%)	7	14

All (212) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	6	VAL
1	A	7	VAL
1	A	10	GLN

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Mol	Chain	Res	Type
1	A	47	GLU
1	A	49	LEU
1	A	52	VAL
1	A	68	ARG
1	A	79	ILE
1	A	81	THR
1	A	103	ARG
1	A	112	ILE
1	A	117	GLU
1	A	146	ASP
1	A	147	ARG
1	A	167	VAL
1	A	178	ILE
1	A	186	GLN
1	A	190	VAL
1	A	206	PRO
1	A	235	GLU
1	A	282	MET
1	A	291	MET
1	A	297	LEU
1	A	298	LYS
1	A	300	LEU
1	A	312	GLU
1	A	314	LEU
1	A	365	VAL
1	A	370	GLN
1	A	391	ARG
1	A	392	ASN
1	A	396	ILE
1	A	410	LEU
1	A	414	ARG
1	A	449	MET
1	A	455	GLN
1	A	468	LEU
1	A	476	VAL
1	A	481	GLN
1	A	487	VAL
1	A	507	GLN
1	A	525	GLU
1	A	531	HIS
1	A	552	LEU
1	A	567	ARG

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Mol	Chain	Res	Type
1	A	571	LEU
1	A	576	LEU
1	A	579	LYS
1	A	587	ILE
1	A	589	ARG
1	A	594	THR
1	A	599	SER
1	A	624	SER
1	A	647	THR
1	A	648	ASN
1	A	682	LEU
1	A	696	ASN
1	A	700	THR
1	A	704	ILE
1	A	705	ASP
1	A	708	GLN
1	A	713	ARG
1	A	714	THR
1	A	759	GLN
1	A	765	VAL
1	A	781	SER
1	A	791	LEU
1	A	796	GLN
1	A	817	VAL
1	A	823	LYS
1	A	835	MET
1	A	839	GLU
1	A	858	LEU
1	A	866	VAL
1	A	867	LYS
1	A	874	VAL
1	A	884	ILE
1	A	902	GLU
1	A	907	ASN
1	A	925	ASP
1	A	931	LEU
1	A	957	VAL
1	A	966	LEU
1	A	969	GLU
1	A	990	GLN
1	A	992	LEU
1	A	1000	LEU

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Mol	Chain	Res	Type
1	A	1032	THR
1	A	1041	THR
1	A	1062	ILE
1	A	1069	GLU
1	A	1093	LEU
1	A	1121	LYS
1	A	1135	GLU
1	B	6	VAL
1	B	24	THR
1	B	35	LYS
1	B	53	LYS
1	B	92	LYS
1	B	109	GLN
1	B	112	ILE
1	B	130	MET
1	B	162	LEU
1	B	185	PRO
1	B	255	GLN
1	B	275	ASP
1	B	277	GLU
1	B	287	LYS
1	B	302	VAL
1	B	304	LEU
1	B	307	GLU
1	B	312	GLU
1	B	354	THR
1	B	367	LEU
1	B	392	ASN
1	B	402	ILE
1	B	427	LEU
1	B	449	MET
1	B	456	GLN
1	B	466	GLN
1	B	477	ARG
1	B	481	GLN
1	B	493	PRO
1	B	498	ILE
1	B	524	GLN
1	B	529	ILE
1	B	543	ILE
1	B	567	ARG
1	B	581	MET

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Mol	Chain	Res	Type
1	B	585	GLU
1	B	597	GLU
1	B	603	LEU
1	B	614	PHE
1	B	630	THR
1	B	699	LEU
1	B	704	ILE
1	B	706	GLU
1	B	713	ARG
1	B	746	SER
1	B	749	THR
1	B	750	THR
1	B	769	LYS
1	B	780	THR
1	B	781	SER
1	B	790	ASN
1	B	793	ILE
1	B	815	SER
1	B	839	GLU
1	B	852	GLN
1	B	866	VAL
1	B	885	ASN
1	B	899	VAL
1	B	901	THR
1	B	908	ASN
1	B	931	LEU
1	B	941	ASN
1	B	943	GLU
1	B	957	VAL
1	B	969	GLU
1	B	980	ASP
1	B	995	VAL
1	B	1000	LEU
1	B	1036	MET
1	B	1040	VAL
1	B	1043	LEU
1	B	1052	LEU
1	B	1078	THR
1	B	1086	THR
1	B	1093	LEU
1	B	1120	MET
1	B	1131	LYS

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Mol	Chain	Res	Type
1	B	1134	GLU
2	C	37	SER
2	C	50	LEU
2	C	106	ASP
2	C	108	THR
2	C	111	THR
2	C	114	VAL
2	C	121	THR
2	C	137	LYS
2	C	145	ILE
2	C	163	ARG
2	C	176	SER
2	C	179	TRP
2	C	190	CYS
2	C	194	CYS
2	C	197	ILE
2	C	206	CYS
2	C	208	CYS
2	C	210	GLN
2	C	211	CYS
2	C	218	CYS
2	C	222	THR
2	D	17	ILE
2	D	18	GLU
2	D	25	GLU
2	D	51	LEU
2	D	86	VAL
2	D	101	PRO
2	D	102	LEU
2	D	111	THR
2	D	122	LEU
2	D	140	LEU
2	D	143	ARG
2	D	145	ILE
2	D	163	ARG
2	D	192	PRO
2	D	194	CYS
2	D	208	CYS
2	D	213	VAL
2	D	215	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	4	ASN
1	A	22	HIS
1	A	30	ASN
1	A	156	ASN
1	A	186	GLN
1	A	234	GLN
1	A	241	ASN
1	A	262	ASN
1	A	290	GLN
1	A	319	ASN
1	A	341	ASN
1	A	343	GLN
1	A	372	GLN
1	A	374	GLN
1	A	455	GLN
1	A	467	GLN
1	A	481	GLN
1	A	507	GLN
1	A	520	GLN
1	A	522	HIS
1	A	578	HIS
1	A	648	ASN
1	A	672	ASN
1	A	711	HIS
1	A	790	ASN
1	A	796	GLN
1	A	809	GLN
1	A	810	ASN
1	A	904	ASN
1	A	907	ASN
1	A	990	GLN
1	A	991	HIS
1	A	1016	ASN
1	A	1034	ASN
1	A	1055	GLN
1	A	1056	ASN
1	A	1070	HIS
1	A	1140	HIS
1	B	4	ASN
1	B	22	HIS
1	B	30	ASN
1	B	105	HIS
1	B	109	GLN

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Mol	Chain	Res	Type
1	B	189	HIS
1	B	203	ASN
1	B	209	GLN
1	B	255	GLN
1	B	262	ASN
1	B	267	ASN
1	B	290	GLN
1	B	343	GLN
1	B	372	GLN
1	B	392	ASN
1	B	397	HIS
1	B	399	HIS
1	B	456	GLN
1	B	466	GLN
1	B	481	GLN
1	B	497	ASN
1	B	507	GLN
1	B	524	GLN
1	B	711	HIS
1	B	743	GLN
1	B	790	ASN
1	B	796	GLN
1	B	803	HIS
1	B	826	ASN
1	B	877	ASN
1	B	904	ASN
1	B	941	ASN
1	B	973	ASN
1	B	991	HIS
1	B	993	GLN
1	B	1015	GLN
1	B	1034	ASN
1	B	1070	HIS
1	B	1140	HIS
2	C	30	GLN
2	C	112	GLN
2	C	210	GLN
2	D	22	ASN
2	D	30	GLN
2	D	31	GLN
2	D	41	ASN
2	D	100	ASN

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Mol	Chain	Res	Type
2	D	112	GLN
2	D	191	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	189:TRP	C	190:CYS	N	0.99

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	1132/1140 (99%)	-0.20	21 (1%) 66 62	18, 47, 99, 160	0
1	B	1134/1140 (99%)	0.25	39 (3%) 48 43	29, 68, 122, 173	0
2	C	174/222 (78%)	0.53	18 (10%) 13 12	32, 62, 118, 183	0
2	D	175/222 (78%)	0.92	28 (16%) 6 6	39, 81, 138, 168	0
All	All	2615/2724 (95%)	0.12	106 (4%) 42 37	18, 59, 117, 183	0

All (106) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	453	ASP	5.3
1	B	571	LEU	4.6
1	A	708	GLN	4.5
2	D	20	GLY	4.5
2	D	16	LEU	4.3
1	B	1018	GLY	4.1
2	D	15	LYS	4.1
1	B	162	LEU	4.0
1	B	750	THR	4.0
2	D	165	ARG	3.9
1	B	367	LEU	3.9
1	B	464	ALA	3.7
2	C	161	PHE	3.7
2	C	164	GLY	3.7
1	B	981	SER	3.5
1	B	746	SER	3.5
2	C	218	CYS	3.5
2	C	152	PRO	3.4
1	A	706	GLU	3.4
1	A	644	LEU	3.3
1	A	571	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
1	B	1119	GLY	3.2
1	B	456	GLN	3.1
2	D	163	ARG	3.1
1	B	368	GLU	3.1
2	C	165	ARG	3.1
1	A	924	GLY	3.1
1	B	206	PRO	3.0
1	A	884	ILE	3.0
1	A	783	GLY	3.0
2	D	209	HIS	2.9
1	B	748	GLY	2.9
1	B	448	LEU	2.9
2	C	206	CYS	2.9
1	B	452	VAL	2.9
2	D	148	PRO	2.9
2	C	50	LEU	2.8
2	D	102	LEU	2.8
2	D	92	THR	2.8
1	B	1015	GLN	2.8
2	D	215	CYS	2.8
2	D	169	GLY	2.8
2	D	218	CYS	2.7
1	B	455	GLN	2.6
2	C	151	ASN	2.6
1	B	980	ASP	2.6
2	C	16	LEU	2.6
1	B	844	LYS	2.6
1	B	451	PHE	2.6
2	D	198	THR	2.6
1	B	443	VAL	2.6
2	D	83	ILE	2.5
2	D	208	CYS	2.5
2	C	180	VAL	2.5
2	D	161	PHE	2.5
2	C	162	LYS	2.5
1	A	983	ALA	2.5
2	C	52	THR	2.5
1	B	369	ARG	2.4
2	D	104	GLY	2.4
1	A	707	ILE	2.4
2	D	26	TYR	2.4
1	A	1016	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	643	SER	2.4
2	C	140	LEU	2.3
2	D	38	LEU	2.3
2	D	214	THR	2.3
1	A	709	LYS	2.3
2	D	107	SER	2.3
1	B	1017	LEU	2.3
2	C	53	ASN	2.3
2	D	21	LEU	2.3
1	B	178	ILE	2.3
1	B	430	VAL	2.3
2	D	159	ILE	2.3
1	A	1022	THR	2.3
1	B	984	THR	2.3
1	B	449	MET	2.2
1	B	422	TYR	2.2
2	C	38	LEU	2.2
1	A	857	LYS	2.2
2	D	166	ASP	2.2
2	C	211	CYS	2.2
1	B	857	LYS	2.2
2	D	33	THR	2.2
1	A	759	GLN	2.2
1	A	1017	LEU	2.2
2	C	208	CYS	2.2
2	D	101	PRO	2.2
1	B	1	MET	2.1
1	B	646	THR	2.1
2	C	215	CYS	2.1
1	A	548	ASP	2.1
1	B	450	GLY	2.1
1	A	662	SER	2.1
2	D	108	THR	2.1
1	A	761	LEU	2.1
1	B	707	ILE	2.1
1	B	1014	MET	2.1
1	A	1018	GLY	2.0
1	B	300	LEU	2.0
1	A	981	SER	2.0
1	A	210	GLU	2.0
1	B	225	PRO	2.0
1	B	218	MET	2.0

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Mol	Chain	Res	Type	RSRZ
2	D	105	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	ZN	C	3001	1/1	0.89	0.13	35,35,35,35	0
3	ZN	C	3002	1/1	0.90	0.11	35,35,35,35	0
3	ZN	D	3004	1/1	0.95	0.18	35,35,35,35	0
3	ZN	D	3003	1/1	0.98	0.15	35,35,35,35	0

6.5 Other polymers [i](#)

There are no such residues in this entry.