W O R L D W I D E
wwPDB
P R O T E I N   D A T A   B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Nov 3, 2024 – 06:42 PM EST

PDB ID	:	1PFQ
Title	:	crystal structure of human apo dipeptidyl peptidase IV / CD26
Authors	:	Oefner, C.; D'Arcy, A.; Mac Sweeney, A.; Pierau, S.; Gardiner, R.; Dale, G.E.
Deposited on	:	2003-05-27
Resolution	:	1.90 Å(reported)

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

|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 1.90 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.

Metric	Percentile Ranks	Value
Rfree		0.302
Clashscore		25
Ramachandran outliers		0.7%
Sidechain outliers		8.4%
RSRZ outliers		15.8%

Worse ——— Better

▮ Percentile relative to all X-ray structures
▯ Percentile relative to X-ray structures of similar resolution
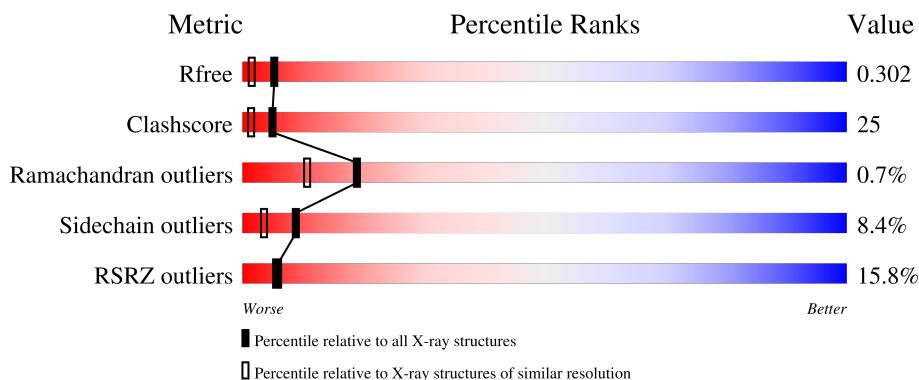
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	164625	7293 (1.90-1.90)
Clashscore	180529	8090 (1.90-1.90)
Ramachandran outliers	177936	8022 (1.90-1.90)
Sidechain outliers	177891	8022 (1.90-1.90)
RSRZ outliers	164620	7292 (1.90-1.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	731	12% / 64% 30% 5%
1	B	731	19% / 59% 34% 6% ••
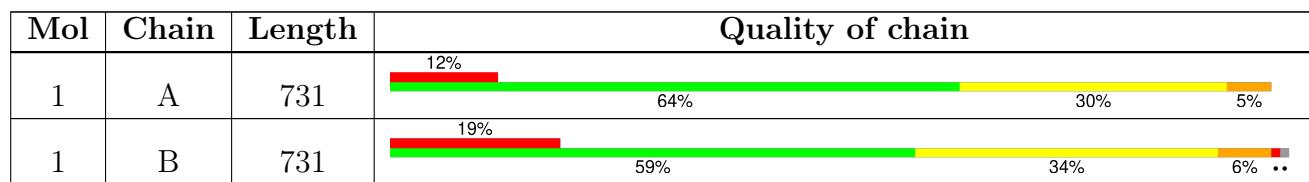
2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 12418 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 Dipeptidyl peptidase IV soluble form.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	728	Total	C	N	O	S	0	0	0
			5964	3827	982	1129	26			
1	B	725	Total	C	N	O	S	0	0	0
			5926	3801	977	1122	26			

- Molecule 2 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).
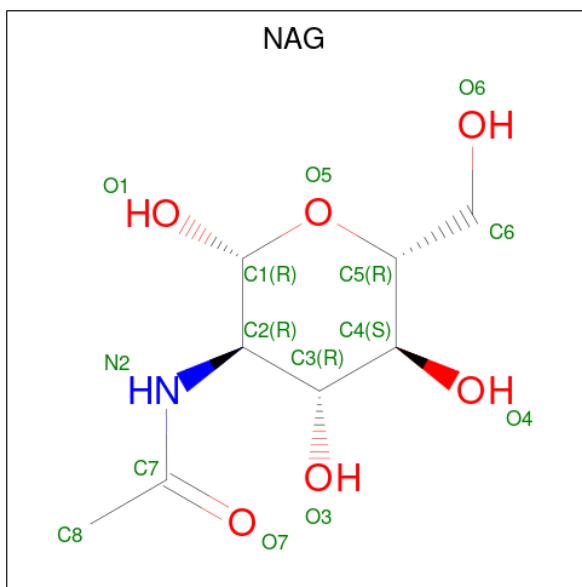
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			14	8	1	5		
2	A	1	Total	C	N	O	0	0
			14	8	1	5		
2	B	1	Total	C	N	O	0	0
			14	8	1	5		
2	B	1	Total	C	N	O	0	0
			14	8	1	5		

• Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	268	Total O 268 268		0	0
3	B	204	Total O 204 204		0	0

3 Residue-property plots ⓘ

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

• Molecule 1: Dipeptidyl peptidase IV soluble form

Chain A:

• Molecule 1: Dipeptidyl peptidase IV soluble form

Chain B:
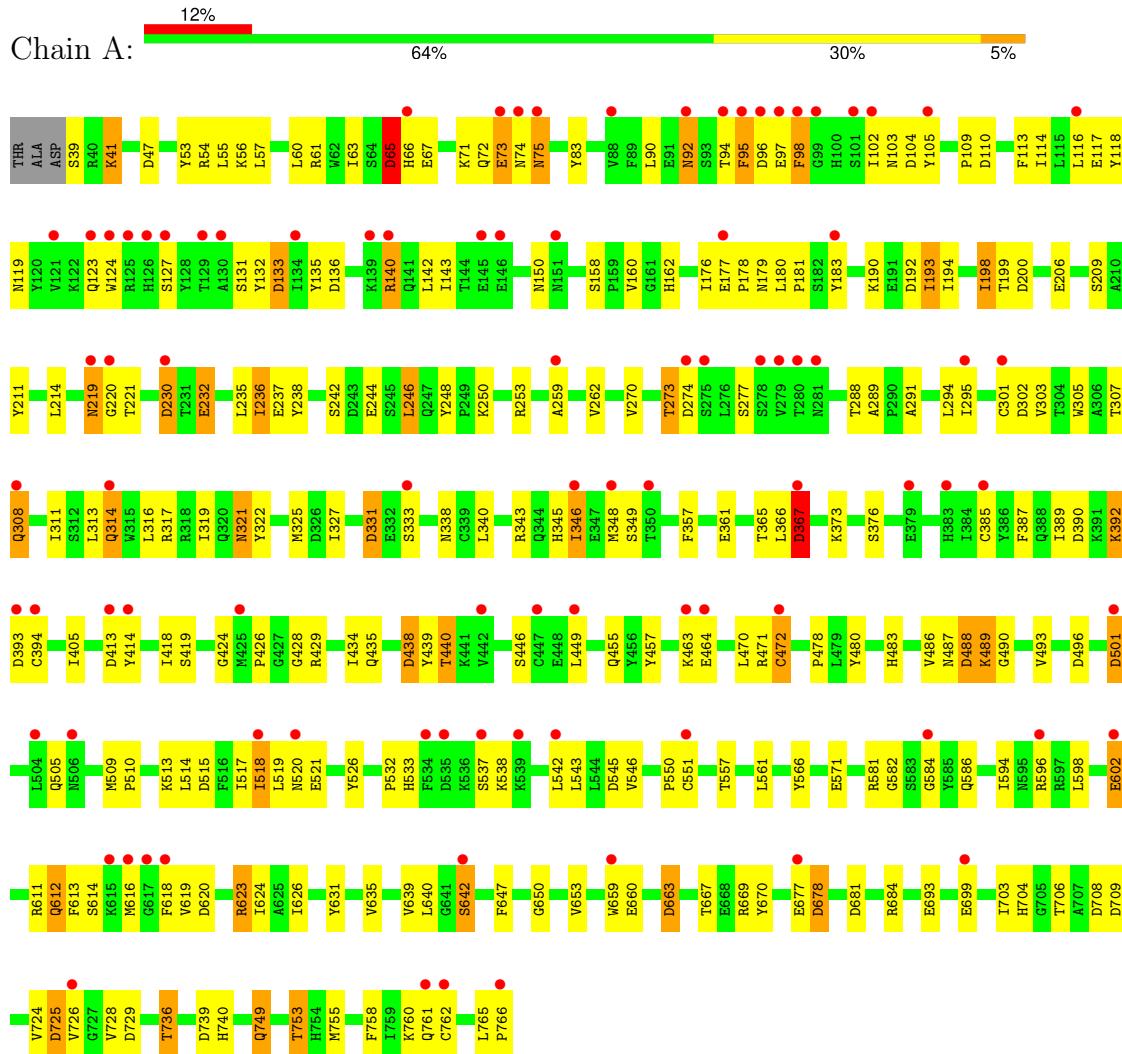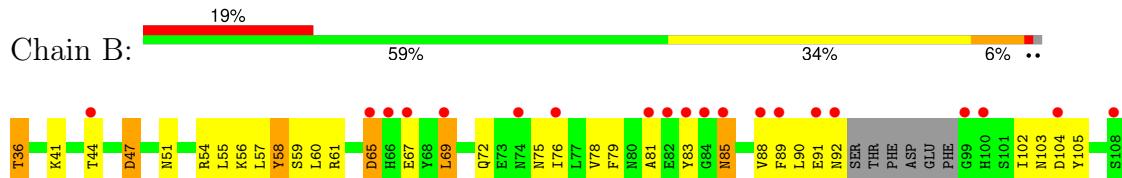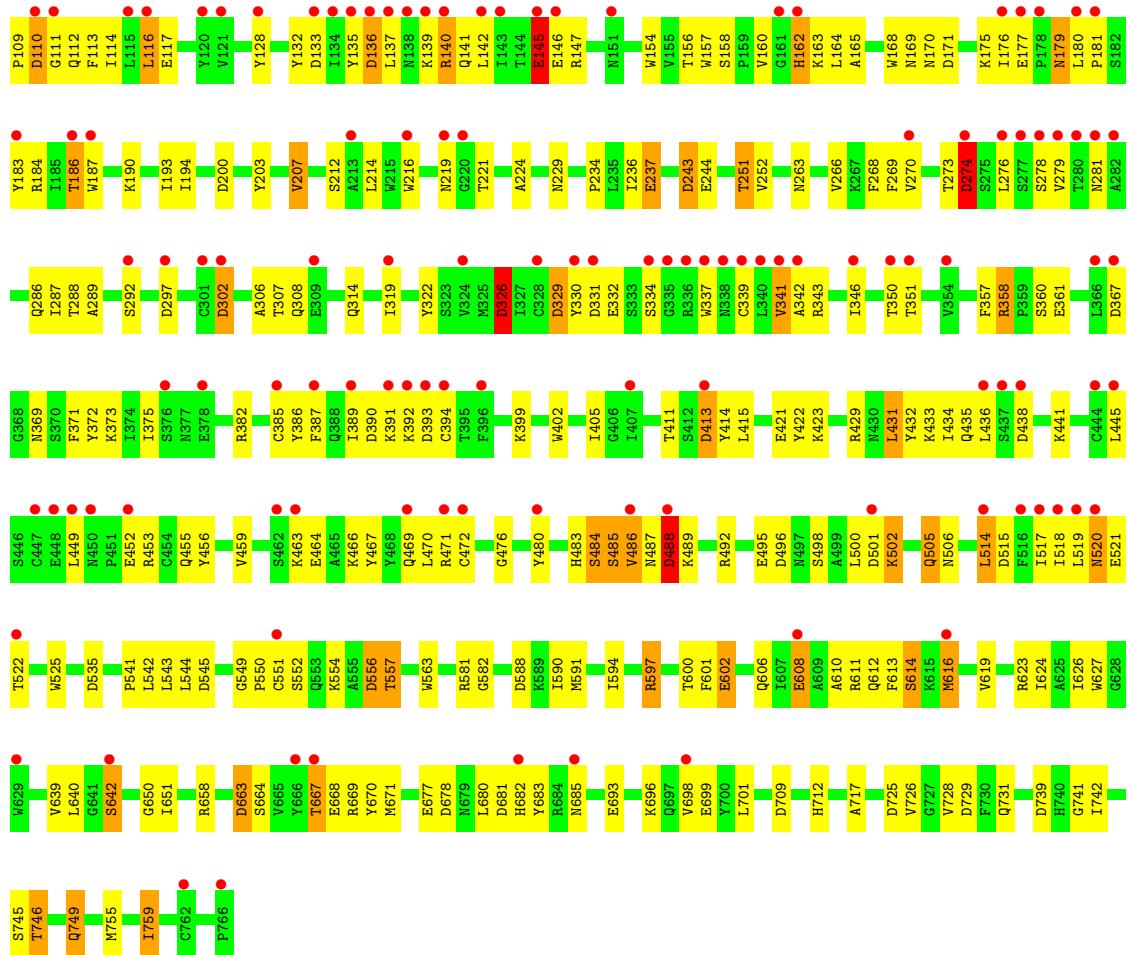
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	71.03Å 118.14Å 184.58Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	20.00 – 1.90 20.00 – 1.90	Depositor EDS
% Data completeness (in resolution range)	98.7 (20.00-1.90) 98.6 (20.00-1.90)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
$< I/\sigma(I) >$ [1]	1.64 (at 1.91Å)	Xtriage
Refinement program	REFMAC 5.0	Depositor
R, R_{free}	0.254 , 0.298 0.259 , 0.302	Depositor DCC
R_{free} test set	6101 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å^2)	37.5	Xtriage
Anisotropy	0.196	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 53.0	EDS
L-test for twinning[2]	$< \lvert L \rvert > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	12418	wwPDB-VP
Average B, all atoms (Å^2)	42.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.76% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< \lvert L \rvert >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

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	0.27	0/6136	0.60	27/8344 (0.3%)
1	B	0.26	0/6094	0.60	33/8287 (0.4%)
All	All	0.26	0/12230	0.60	60/16631 (0.4%)

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	0	1

There are no bond length outliers.

All (60) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	545	ASP	CB-CG-OD2	6.25	123.93	118.30
1	A	545	ASP	CB-CG-OD2	5.91	123.62	118.30
1	B	725	ASP	CB-CG-OD2	5.82	123.54	118.30
1	A	200	ASP	CB-CG-OD2	5.79	123.51	118.30
1	A	725	ASP	CB-CG-OD2	5.79	123.51	118.30
1	A	663	ASP	CB-CG-OD2	5.74	123.46	118.30
1	A	739	ASP	CB-CG-OD2	5.67	123.40	118.30
1	B	739	ASP	CB-CG-OD2	5.62	123.36	118.30
1	B	729	ASP	CB-CG-OD2	5.61	123.35	118.30
1	A	192	ASP	CB-CG-OD2	5.55	123.30	118.30
1	B	393	ASP	CB-CG-OD2	5.52	123.27	118.30
1	B	501	ASP	CB-CG-OD2	5.46	123.21	118.30
1	A	488	ASP	CB-CG-OD2	5.45	123.21	118.30
1	B	136	ASP	CB-CG-OD2	5.43	123.19	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	367	ASP	CB-CG-OD2	5.43	123.19	118.30
1	A	47	ASP	CB-CG-OD2	5.41	123.17	118.30
1	A	136	ASP	CB-CG-OD2	5.39	123.15	118.30
1	B	331	ASP	CB-CG-OD2	5.39	123.15	118.30
1	A	413	ASP	CB-CG-OD2	5.38	123.14	118.30
1	A	393	ASP	CB-CG-OD2	5.36	123.12	118.30
1	A	709	ASP	CB-CG-OD2	5.34	123.11	118.30
1	B	678	ASP	CB-CG-OD2	5.33	123.10	118.30
1	B	65	ASP	CB-CG-OD2	5.31	123.08	118.30
1	A	104	ASP	CB-CG-OD2	5.29	123.06	118.30
1	B	413	ASP	CB-CG-OD2	5.29	123.06	118.30
1	A	438	ASP	CB-CG-OD2	5.29	123.06	118.30
1	A	274	ASP	CB-CG-OD2	5.28	123.05	118.30
1	B	390	ASP	CB-CG-OD2	5.28	123.05	118.30
1	B	709	ASP	CB-CG-OD2	5.27	123.04	118.30
1	B	663	ASP	CB-CG-OD2	5.27	123.04	118.30
1	B	302	ASP	CB-CG-OD2	5.25	123.03	118.30
1	B	515	ASP	CB-CG-OD2	5.23	123.01	118.30
1	B	243	ASP	CB-CG-OD2	5.22	123.00	118.30
1	A	681	ASP	CB-CG-OD2	5.22	122.99	118.30
1	A	230	ASP	CB-CG-OD2	5.21	122.99	118.30
1	A	678	ASP	CB-CG-OD2	5.20	122.98	118.30
1	B	329	ASP	CB-CG-OD2	5.20	122.98	118.30
1	B	104	ASP	CB-CG-OD2	5.20	122.98	118.30
1	A	133	ASP	CB-CG-OD2	5.19	122.97	118.30
1	A	367	ASP	CB-CG-OD2	5.19	122.97	118.30
1	B	110	ASP	CB-CG-OD2	5.18	122.97	118.30
1	A	65	ASP	CB-CG-OD2	5.18	122.96	118.30
1	B	438	ASP	CB-CG-OD2	5.17	122.95	118.30
1	B	488	ASP	CB-CG-OD2	5.16	122.95	118.30
1	A	515	ASP	CB-CG-OD2	5.14	122.92	118.30
1	B	274	ASP	CB-CG-OD2	5.11	122.90	118.30
1	B	681	ASP	CB-CG-OD2	5.11	122.90	118.30
1	A	729	ASP	CB-CG-OD2	5.11	122.90	118.30
1	B	535	ASP	CB-CG-OD2	5.11	122.89	118.30
1	B	200	ASP	CB-CG-OD2	5.09	122.89	118.30
1	B	47	ASP	CB-CG-OD2	5.09	122.88	118.30
1	A	331	ASP	CB-CG-OD2	5.09	122.88	118.30
1	A	501	ASP	CB-CG-OD2	5.08	122.87	118.30
1	B	297	ASP	CB-CG-OD2	5.07	122.86	118.30
1	A	390	ASP	CB-CG-OD2	5.05	122.84	118.30
1	A	496	ASP	CB-CG-OD2	5.03	122.83	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	556	ASP	CB-CG-OD2	5.03	122.83	118.30
1	B	496	ASP	CB-CG-OD2	5.03	122.83	118.30
1	B	326	ASP	CB-CG-OD2	5.02	122.81	118.30
1	B	588	ASP	CB-CG-OD2	5.01	122.81	118.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	581	ARG	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5964	0	5683	271	3
1	B	5926	0	5650	314	3
2	A	28	0	26	1	0
2	B	28	0	26	1	0
3	A	268	0	0	26	0
3	B	204	0	0	16	2
All	All	12418	0	11385	573	5

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 25.

All (573) 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:A:517:ILE:HG21	1:A:612:GLN:NE2	1.28	1.45
1:A:517:ILE:CG2	1:A:612:GLN:HE22	1.37	1.36
1:A:198:ILE:HD11	1:A:211:TYR:CE2	1.73	1.22
1:B:544:LEU:HD21	1:B:606:GLN:NE2	1.56	1.20
1:A:150:ASN:ND2	3:A:1095:HOH:O	1.71	1.17
1:A:620:ASP:OD2	1:A:623:ARG:NH1	1.77	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:74:ASN:HB3	1:A:92:ASN:ND2	1.59	1.13
1:B:81:ALA:O	1:B:492:ARG:NH2	1.81	1.13
1:B:357:PHE:CZ	1:B:551:CYS:HB2	1.86	1.10
1:A:160:VAL:CG2	1:A:219:ASN:O	2.01	1.09
1:B:484:SER:O	1:B:488:ASP:HA	1.53	1.09
1:B:83:TYR:O	1:B:492:ARG:CZ	2.00	1.08
1:B:350:THR:HG23	1:B:351:THR:HG23	1.36	1.06
1:A:74:ASN:HB3	1:A:92:ASN:CG	1.75	1.03
1:A:198:ILE:HD11	1:A:211:TYR:CZ	1.94	1.03
1:B:544:LEU:CD2	1:B:606:GLN:NE2	2.22	1.03
1:A:95:PHE:HA	1:A:98:PHE:HB2	1.40	1.01
1:A:198:ILE:CD1	1:A:211:TYR:CZ	2.46	0.99
1:B:519:LEU:HD21	1:B:612:GLN:NE2	1.77	0.99
1:A:623:ARG:HG3	1:A:623:ARG:HH11	1.26	0.98
1:A:198:ILE:CD1	1:A:211:TYR:CE2	2.46	0.98
1:A:94:THR:HG21	1:A:102:ILE:HD12	1.45	0.98
1:B:505:GLN:HE21	1:B:505:GLN:HA	1.26	0.97
1:B:749:GLN:NE2	3:B:931:HOH:O	1.97	0.96
1:A:724:VAL:HG12	1:B:746:THR:CG2	1.96	0.96
1:B:685:ASN:ND2	3:B:1022:HOH:O	1.99	0.96
1:A:103:ASN:ND2	1:A:117:GLU:OE1	1.99	0.95
1:A:71:LYS:HD2	1:A:105:TYR:OH	1.67	0.95
1:B:329:ASP:OD2	1:B:343:ARG:NH1	1.98	0.95
1:B:341:VAL:HG22	1:B:342:ALA:H	1.31	0.94
1:B:514:LEU:C	1:B:514:LEU:HD23	1.87	0.94
1:B:731:GLN:NE2	3:B:880:HOH:O	2.02	0.93
1:B:405:ILE:HD13	1:B:429:ARG:HD3	1.49	0.93
1:B:244:GLU:OE2	3:B:863:HOH:O	1.88	0.91
1:A:538:LYS:O	1:A:618:PHE:HA	1.72	0.90
1:A:135:TYR:OH	1:A:140:ARG:HA	1.70	0.90
1:A:160:VAL:HG21	1:A:219:ASN:O	1.71	0.90
1:A:237:GLU:OE1	1:B:251:THR:HG22	1.71	0.90
1:A:724:VAL:HG12	1:B:746:THR:HG22	1.54	0.89
1:A:176:ILE:HD12	1:A:183:TYR:HE2	1.36	0.89
1:A:72:GLN:O	1:A:73:GLU:HG2	1.72	0.89
1:B:492:ARG:HG2	3:B:939:HOH:O	1.70	0.89
1:B:519:LEU:HD21	1:B:612:GLN:HE21	1.35	0.88
1:A:660:GLU:HG2	3:A:959:HOH:O	1.71	0.88
1:A:74:ASN:HB3	1:A:92:ASN:HD21	1.34	0.88
1:B:514:LEU:HD23	1:B:514:LEU:O	1.73	0.88
1:A:405:ILE:HD12	1:A:419:SER:HA	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:487:ASN:HB2	1:B:489:LYS:HZ2	1.39	0.87
1:A:762:CYS:HB2	3:A:1115:HOH:O	1.75	0.87
1:A:160:VAL:HG22	1:A:219:ASN:O	1.73	0.87
1:B:486:VAL:HG12	1:B:487:ASN:N	1.90	0.86
1:A:726:VAL:HG12	1:A:728:VAL:HG23	1.56	0.86
1:B:459:VAL:HG12	1:B:470:LEU:HD23	1.58	0.85
1:A:65:ASP:OD1	3:A:1097:HOH:O	1.94	0.85
1:B:83:TYR:O	1:B:492:ARG:NH1	2.09	0.85
1:A:94:THR:HG21	1:A:102:ILE:CD1	2.07	0.85
1:B:326:ASP:OD2	1:B:339:CYS:HB3	1.77	0.85
1:A:749:GLN:O	1:A:753:THR:HG23	1.76	0.84
1:A:74:ASN:HB3	1:A:92:ASN:OD1	1.76	0.84
1:A:387:PHE:CE2	1:A:394:CYS:HB3	2.13	0.84
1:B:65:ASP:OD1	1:B:466:LYS:HD2	1.78	0.84
1:B:505:GLN:HA	1:B:505:GLN:NE2	1.90	0.84
1:A:678:ASP:OD1	3:A:1076:HOH:O	1.97	0.83
1:A:74:ASN:CB	1:A:92:ASN:ND2	2.42	0.83
1:A:660:GLU:OE2	3:A:959:HOH:O	1.97	0.83
1:B:139:LYS:O	1:B:141:GLN:N	2.12	0.82
1:B:487:ASN:HB2	1:B:489:LYS:NZ	1.93	0.82
1:A:321:ASN:HD22	1:A:321:ASN:H	1.25	0.82
1:A:765:LEU:HB2	1:A:766:PRO:HD3	1.61	0.82
1:B:203:TYR:HA	1:B:207:VAL:HG13	1.62	0.82
1:B:243:ASP:OD2	3:B:1058:HOH:O	1.96	0.82
1:A:438:ASP:OD2	1:A:440:THR:HB	1.79	0.81
1:B:544:LEU:CD2	1:B:606:GLN:HE21	1.93	0.81
1:A:236:ILE:HD13	1:A:237:GLU:N	1.96	0.81
1:A:291:ALA:O	1:A:295:ILE:HG13	1.79	0.81
1:A:584:GLY:O	1:A:586:GLN:NE2	2.15	0.80
1:B:463:LYS:HG2	1:B:464:GLU:HG2	1.62	0.80
1:A:135:TYR:HE1	1:A:140:ARG:O	1.64	0.80
1:A:357:PHE:CZ	1:A:551:CYS:HB2	2.17	0.80
1:B:180:LEU:HB3	1:B:181:PRO:CD	2.12	0.80
1:B:544:LEU:HD21	1:B:606:GLN:HE22	1.45	0.80
1:B:414:TYR:CE1	1:B:433:LYS:HE3	2.17	0.79
1:A:455:GLN:HB2	1:A:557:THR:HG21	1.64	0.79
1:A:623:ARG:NH1	1:A:623:ARG:HG3	1.95	0.79
1:B:314:GLN:OE1	1:B:373:LYS:NZ	2.15	0.79
1:A:640:LEU:HD11	1:A:650:GLY:HA3	1.65	0.79
1:A:198:ILE:HD11	1:A:211:TYR:HE2	1.48	0.79
1:A:463:LYS:HB2	1:A:463:LYS:NZ	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:65:ASP:OD2	1:B:463:LYS:O	2.00	0.78
1:B:456:TYR:HB2	1:B:557:THR:HG22	1.65	0.78
1:A:736:THR:HG21	1:B:717:ALA:O	1.83	0.78
1:B:179:ASN:C	1:B:179:ASN:HD22	1.87	0.78
1:A:367:ASP:OD2	3:A:981:HOH:O	2.02	0.78
1:A:346:ILE:HD11	1:A:348:MET:CE	2.14	0.78
1:B:113:PHE:HE2	1:B:162:HIS:HD2	1.32	0.77
1:A:123:GLN:HB3	1:A:127:SER:HB3	1.65	0.77
1:B:519:LEU:HD13	1:B:608:GLU:OE1	1.84	0.77
1:B:183:TYR:HE1	1:B:279:VAL:HG12	1.50	0.77
1:A:725:ASP:HA	1:B:746:THR:HG21	1.66	0.76
1:A:596:ARG:NE	3:A:957:HOH:O	2.12	0.76
1:B:190:LYS:HD2	1:B:193:ILE:HD12	1.68	0.76
1:B:273:THR:O	1:B:276:LEU:CD2	2.33	0.76
1:A:131:SER:OG	1:A:150:ASN:OD1	2.01	0.76
1:A:653:VAL:HG21	1:A:755:MET:HE1	1.67	0.76
1:B:287:ILE:CG2	1:B:339:CYS:SG	2.75	0.75
1:A:760:LYS:HE3	1:A:766:PRO:HG3	1.65	0.75
1:A:653:VAL:CG2	1:A:755:MET:HE2	2.17	0.75
1:B:357:PHE:CZ	1:B:551:CYS:CB	2.66	0.75
1:B:519:LEU:CD2	1:B:612:GLN:NE2	2.49	0.75
1:A:653:VAL:CG2	1:A:755:MET:CE	2.65	0.75
1:B:44:THR:HG23	1:B:47:ASP:H	1.52	0.74
1:A:405:ILE:HD12	1:A:419:SER:CA	2.18	0.73
1:A:71:LYS:CD	1:A:105:TYR:OH	2.36	0.73
1:A:74:ASN:CB	1:A:92:ASN:CG	2.54	0.73
1:B:171:ASP:OD1	1:B:186:THR:CG2	2.35	0.73
1:A:198:ILE:CG1	1:A:211:TYR:CE2	2.71	0.73
1:A:135:TYR:CE1	1:A:140:ARG:O	2.41	0.73
1:B:193:ILE:HG22	1:B:194:ILE:HG12	1.69	0.73
1:B:411:THR:HG22	1:B:414:TYR:H	1.51	0.72
1:B:486:VAL:HG12	1:B:487:ASN:H	1.53	0.72
1:A:236:ILE:HD13	1:A:236:ILE:C	2.09	0.72
1:B:179:ASN:ND2	1:B:179:ASN:O	2.21	0.72
1:B:60:LEU:HD11	1:B:469:GLN:OE1	1.90	0.72
1:B:243:ASP:CG	3:B:1058:HOH:O	2.26	0.72
1:B:135:TYR:CZ	1:B:142:LEU:HD12	2.25	0.72
1:A:343:ARG:HG3	1:A:389:ILE:O	1.91	0.71
1:B:113:PHE:HE2	1:B:162:HIS:CD2	2.07	0.71
1:A:724:VAL:CG1	1:B:746:THR:HG22	2.20	0.71
1:B:613:PHE:O	1:B:616:MET:HG3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:405:ILE:HD13	1:B:429:ARG:CD	2.21	0.70
1:A:434:ILE:HD11	1:A:439:TYR:O	1.91	0.70
1:A:317:ARG:NH2	3:A:875:HOH:O	2.25	0.70
1:A:73:GLU:HG3	1:A:74:ASN:N	2.07	0.70
1:A:314:GLN:HE22	1:A:373:LYS:HZ2	1.40	0.70
1:B:156:THR:HG23	1:B:216:TRP:HE1	1.57	0.70
1:B:287:ILE:HG23	1:B:339:CYS:SG	2.32	0.70
1:B:158:SER:OG	1:B:160:VAL:O	2.09	0.69
1:B:486:VAL:CG1	1:B:487:ASN:N	2.55	0.69
1:B:505:GLN:HE21	1:B:505:GLN:CA	1.98	0.69
1:A:117:GLU:HB3	1:A:132:TYR:CE1	2.28	0.69
1:B:597:ARG:HA	1:B:682:HIS:CD2	2.28	0.69
1:A:463:LYS:HB2	1:A:463:LYS:HZ2	1.57	0.69
1:A:653:VAL:HG22	1:A:755:MET:HE2	1.74	0.69
1:B:114:ILE:HG21	1:B:140:ARG:HH12	1.57	0.68
1:B:135:TYR:OH	1:B:142:LEU:HD12	1.94	0.68
1:A:74:ASN:CB	1:A:92:ASN:OD1	2.41	0.68
1:A:314:GLN:HE22	1:A:373:LYS:NZ	1.92	0.68
1:B:431:LEU:HD23	1:B:432:TYR:N	2.09	0.68
1:A:602:GLU:OE2	1:A:631:TYR:OH	2.11	0.67
1:B:180:LEU:HB3	1:B:181:PRO:HD2	1.75	0.67
1:B:663:ASP:O	1:B:667:THR:HG23	1.95	0.67
1:B:243:ASP:OD1	3:B:1058:HOH:O	2.12	0.67
1:A:760:LYS:CE	1:A:766:PRO:HG3	2.25	0.67
1:B:117:GLU:HB3	1:B:132:TYR:CE1	2.31	0.67
1:B:342:ALA:HB1	1:B:391:LYS:HE3	1.74	0.67
1:A:198:ILE:HG12	1:A:199:THR:N	2.09	0.66
1:A:244:GLU:OE2	3:A:1116:HOH:O	2.13	0.66
1:A:143:ILE:CD1	1:A:178:PRO:HB2	2.25	0.66
1:A:322:TYR:HD2	1:A:348:MET:HG2	1.59	0.66
1:B:341:VAL:HG22	1:B:342:ALA:N	2.08	0.66
1:A:493:VAL:O	3:A:997:HOH:O	2.13	0.66
1:B:65:ASP:OD1	1:B:466:LYS:CD	2.43	0.65
1:B:102:ILE:HD13	1:B:105:TYR:OH	1.96	0.65
1:A:57:LEU:O	3:A:992:HOH:O	2.13	0.65
1:B:156:THR:HG21	1:B:214:LEU:HD11	1.78	0.65
1:A:346:ILE:H	1:A:392:LYS:HZ1	1.44	0.65
1:A:405:ILE:HD13	1:A:418:ILE:HG22	1.79	0.65
1:A:114:ILE:CG2	1:A:135:TYR:HB3	2.27	0.65
1:A:518:ILE:HG13	1:A:518:ILE:O	1.94	0.65
1:A:198:ILE:CD1	1:A:211:TYR:OH	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:520:ASN:O	1:B:521:GLU:HB2	1.95	0.65
1:A:571:GLU:OE2	3:A:917:HOH:O	2.14	0.65
1:A:73:GLU:HG3	1:A:74:ASN:H	1.62	0.64
1:A:237:GLU:OE1	1:B:251:THR:CG2	2.44	0.64
1:A:346:ILE:HD11	1:A:348:MET:HE3	1.78	0.64
1:B:597:ARG:HD3	1:B:600:THR:OG1	1.97	0.64
1:B:431:LEU:HD22	1:B:445:LEU:HD12	1.79	0.64
1:B:544:LEU:HD21	1:B:606:GLN:HE21	1.52	0.64
1:B:402:TRP:CD1	1:B:421:GLU:HG3	2.32	0.64
1:B:411:THR:HG23	1:B:413:ASP:H	1.62	0.64
1:B:663:ASP:O	1:B:667:THR:CG2	2.45	0.64
1:A:63:ILE:HD11	1:A:67:GLU:HB2	1.80	0.64
1:A:124:TRP:H	1:A:127:SER:HB3	1.63	0.63
1:A:198:ILE:HD12	1:A:211:TYR:CZ	2.33	0.63
1:A:346:ILE:HD11	1:A:348:MET:HE2	1.80	0.63
1:A:550:PRO:O	1:A:551:CYS:CB	2.47	0.63
1:B:544:LEU:CD2	1:B:606:GLN:HE22	2.02	0.63
1:A:726:VAL:O	1:A:726:VAL:CG1	2.46	0.63
1:B:610:ALA:O	1:B:614:SER:HB2	1.98	0.63
1:A:236:ILE:HD12	1:A:238:TYR:HD2	1.64	0.63
1:A:471:ARG:HG3	1:A:480:TYR:CE2	2.34	0.63
1:A:253:ARG:HD2	3:A:960:HOH:O	1.98	0.63
1:A:557:THR:HG22	1:A:557:THR:O	1.97	0.63
1:B:83:TYR:O	1:B:492:ARG:NH2	2.32	0.63
1:B:455:GLN:HB2	1:B:557:THR:HG21	1.79	0.63
1:B:557:THR:O	1:B:557:THR:CG2	2.47	0.63
1:A:301:CYS:SG	1:A:316:LEU:HB2	2.39	0.62
1:A:557:THR:O	1:A:557:THR:CG2	2.46	0.62
1:B:116:LEU:HD12	1:B:133:ASP:O	1.98	0.62
1:A:653:VAL:HG21	1:A:755:MET:CE	2.28	0.62
1:B:67:GLU:CD	1:B:78:VAL:CG1	2.68	0.62
1:B:557:THR:O	1:B:557:THR:HG23	1.99	0.62
1:A:726:VAL:O	1:A:726:VAL:HG13	2.00	0.62
1:B:88:VAL:HG11	1:B:91:GLU:HB2	1.82	0.62
1:B:498:SER:O	1:B:502:LYS:HG2	1.99	0.62
1:B:519:LEU:CD1	1:B:608:GLU:OE1	2.46	0.62
1:B:128:TYR:HE2	1:B:132:TYR:OH	1.82	0.62
1:B:484:SER:O	1:B:488:ASP:CA	2.41	0.62
1:B:350:THR:HG23	1:B:351:THR:CG2	2.24	0.61
1:A:94:THR:CG2	1:A:102:ILE:CD1	2.77	0.61
1:B:273:THR:HA	1:B:276:LEU:HD22	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:640:LEU:HD11	1:B:650:GLY:HA3	1.82	0.61
1:A:761:GLN:NE2	3:A:1115:HOH:O	2.33	0.61
1:B:229:ASN:HB2	3:B:1038:HOH:O	1.99	0.61
1:A:71:LYS:HD2	1:A:105:TYR:HH	1.64	0.61
1:A:236:ILE:CD1	1:A:238:TYR:HD2	2.14	0.61
1:A:198:ILE:HD11	1:A:211:TYR:OH	1.99	0.61
1:A:653:VAL:CG2	1:A:755:MET:HE1	2.30	0.61
1:B:463:LYS:HG2	1:B:464:GLU:OE2	2.01	0.61
1:B:471:ARG:HG2	1:B:480:TYR:CE2	2.35	0.61
1:B:405:ILE:CD1	1:B:429:ARG:HD3	2.26	0.60
1:B:128:TYR:HE2	1:B:132:TYR:HH	1.50	0.60
1:B:276:LEU:N	1:B:276:LEU:HD23	2.17	0.60
1:A:653:VAL:HG22	1:A:755:MET:CE	2.29	0.60
1:A:724:VAL:O	1:B:746:THR:HG23	2.00	0.60
1:B:342:ALA:HB1	1:B:391:LYS:CE	2.32	0.60
1:A:598:LEU:HD13	1:A:659:TRP:CZ2	2.36	0.60
1:B:288:THR:HG22	1:B:289:ALA:O	2.02	0.60
1:B:726:VAL:HG12	1:B:728:VAL:HG23	1.84	0.60
1:B:179:ASN:C	1:B:179:ASN:ND2	2.55	0.59
1:B:459:VAL:HG12	1:B:470:LEU:CD2	2.32	0.59
1:A:517:ILE:HG21	1:A:612:GLN:HE22	0.51	0.59
1:A:74:ASN:C	1:A:92:ASN:ND2	2.55	0.59
1:A:198:ILE:HG13	1:A:211:TYR:CE2	2.37	0.59
1:A:41:LYS:HE3	1:A:53:TYR:OH	2.02	0.59
1:A:176:ILE:HD12	1:A:183:TYR:CE2	2.28	0.59
1:A:611:ARG:O	1:A:614:SER:HB2	2.02	0.59
1:B:463:LYS:CG	1:B:464:GLU:OE2	2.50	0.59
1:A:550:PRO:O	1:A:551:CYS:HB2	2.03	0.59
1:A:765:LEU:CB	1:A:766:PRO:HD3	2.29	0.59
1:A:72:GLN:O	1:A:73:GLU:CG	2.47	0.59
1:B:83:TYR:HB2	1:B:85:ASN:OD1	2.03	0.59
1:A:56:LYS:HD2	3:A:999:HOH:O	2.01	0.58
1:A:71:LYS:NZ	1:A:105:TYR:OH	2.35	0.58
1:B:44:THR:HG22	1:B:47:ASP:CG	2.23	0.58
1:B:171:ASP:OD1	1:B:186:THR:HG23	2.02	0.58
1:A:703:ILE:HD12	1:A:755:MET:CE	2.34	0.58
1:B:273:THR:O	1:B:276:LEU:HD22	2.03	0.58
1:B:402:TRP:NE1	1:B:421:GLU:HG3	2.17	0.58
1:B:411:THR:HG22	1:B:414:TYR:N	2.19	0.58
1:A:63:ILE:HD11	1:A:67:GLU:CB	2.34	0.58
1:A:405:ILE:CD1	1:A:419:SER:HA	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:463:LYS:HG2	1:B:464:GLU:CG	2.34	0.58
1:A:758:PHE:O	1:A:761:GLN:HG3	2.03	0.58
1:B:67:GLU:CD	1:B:78:VAL:HG11	2.23	0.58
1:B:498:SER:O	1:B:502:LYS:CG	2.52	0.58
1:B:514:LEU:O	1:B:514:LEU:CD2	2.50	0.58
1:A:63:ILE:CD1	1:A:67:GLU:HB2	2.34	0.58
1:B:171:ASP:OD1	1:B:186:THR:HG22	2.03	0.58
1:B:487:ASN:CG	1:B:489:LYS:HZ1	2.07	0.57
1:A:760:LYS:HB3	1:A:766:PRO:CG	2.34	0.57
1:B:308:GLN:HA	1:B:308:GLN:OE1	2.04	0.57
1:B:110:ASP:OD1	1:B:112:GLN:HG3	2.03	0.57
1:B:146:GLU:O	1:B:175:LYS:HE3	2.05	0.57
1:B:402:TRP:CE2	1:B:421:GLU:HG3	2.40	0.57
1:B:431:LEU:CD2	1:B:432:TYR:N	2.68	0.57
1:B:518:ILE:O	1:B:518:ILE:HG13	2.04	0.57
1:A:114:ILE:HG23	1:A:135:TYR:HB3	1.86	0.57
1:B:470:LEU:HD12	1:B:483:HIS:NE2	2.20	0.57
1:A:143:ILE:HD11	1:A:178:PRO:HB2	1.87	0.56
1:A:135:TYR:OH	1:A:140:ARG:CA	2.48	0.56
1:B:640:LEU:HD22	1:B:698:VAL:HG11	1.87	0.56
1:A:387:PHE:CE2	1:A:394:CYS:CB	2.87	0.56
1:B:745:SER:O	1:B:749:GLN:NE2	2.39	0.56
1:B:103:ASN:ND2	1:B:117:GLU:OE1	2.32	0.56
1:B:128:TYR:CE2	1:B:132:TYR:OH	2.59	0.56
1:B:184:ARG:HD3	1:B:187:TRP:CZ2	2.40	0.56
1:B:287:ILE:HG21	1:B:339:CYS:SG	2.45	0.56
1:A:235:LEU:HD22	1:A:235:LEU:N	2.21	0.56
1:A:724:VAL:CG1	1:B:746:THR:CG2	2.78	0.56
1:A:703:ILE:HD12	1:A:755:MET:HE3	1.88	0.55
1:A:96:ASP:O	1:A:142:LEU:CD1	2.55	0.55
1:B:273:THR:C	1:B:276:LEU:HD22	2.26	0.55
1:A:71:LYS:CD	1:A:105:TYR:HH	2.19	0.55
1:A:660:GLU:CG	3:A:959:HOH:O	2.42	0.55
1:A:463:LYS:HD2	3:A:1097:HOH:O	2.05	0.55
1:B:371:PHE:CE2	1:B:387:PHE:CD1	2.95	0.55
1:B:471:ARG:CG	1:B:480:TYR:CE2	2.90	0.55
1:A:365:THR:HB	3:A:981:HOH:O	2.06	0.55
1:A:435:GLN:O	1:A:439:TYR:HA	2.07	0.55
1:B:514:LEU:C	1:B:514:LEU:CD2	2.62	0.55
1:B:342:ALA:CB	1:B:391:LYS:HE3	2.37	0.55
1:A:594:ILE:HD12	1:A:598:LEU:CD2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:749:GLN:O	1:A:753:THR:CG2	2.53	0.54
1:B:487:ASN:CB	1:B:489:LYS:NZ	2.69	0.54
1:A:219:ASN:N	1:A:220:GLY:HA2	2.21	0.54
1:A:325:MET:HE1	1:A:327:ILE:HD11	1.90	0.54
1:B:453:ARG:HG3	1:B:476:GLY:HA3	1.89	0.54
1:B:346:ILE:HG12	3:B:899:HOH:O	2.06	0.54
1:B:544:LEU:CG	1:B:606:GLN:HE22	2.20	0.54
1:B:519:LEU:CD2	1:B:612:GLN:HE21	2.12	0.54
1:B:544:LEU:HD23	1:B:606:GLN:HE21	1.70	0.54
1:B:563:TRP:CH2	1:B:755:MET:HE2	2.43	0.54
1:B:184:ARG:HD3	1:B:187:TRP:CE2	2.43	0.54
1:B:169:ASN:O	1:B:170:ASN:HB2	2.08	0.54
1:B:36:THR:CG2	3:B:1026:HOH:O	2.56	0.54
1:A:346:ILE:CD1	1:A:348:MET:HG3	2.38	0.53
2:B:855:NAG:O3	3:B:1017:HOH:O	2.19	0.53
1:B:60:LEU:CD1	1:B:469:GLN:OE1	2.57	0.53
1:B:391:LYS:O	1:B:392:LYS:HB2	2.08	0.53
1:A:357:PHE:CZ	1:A:551:CYS:CB	2.91	0.53
1:A:206:GLU:OE2	1:A:663:ASP:OD1	2.25	0.53
1:A:291:ALA:O	1:A:295:ILE:CG1	2.52	0.53
1:B:61:ARG:NH2	1:B:105:TYR:O	2.41	0.53
1:B:180:LEU:CB	1:B:181:PRO:CD	2.80	0.53
1:B:56:LYS:HD3	1:B:495:GLU:OE1	2.08	0.53
1:B:276:LEU:HD23	1:B:276:LEU:H	1.72	0.53
1:B:639:VAL:O	1:B:642:SER:HB2	2.09	0.53
1:A:760:LYS:HB3	1:A:766:PRO:CD	2.38	0.53
1:B:387:PHE:CE2	1:B:394:CYS:HB3	2.44	0.53
1:A:198:ILE:HD12	1:A:211:TYR:OH	2.09	0.53
1:A:322:TYR:CD2	1:A:348:MET:HG2	2.43	0.53
1:A:546:VAL:HG21	1:A:635:VAL:HG11	1.90	0.53
1:A:242:SER:HB3	1:A:246:LEU:HD12	1.90	0.53
1:B:341:VAL:HG13	1:B:342:ALA:N	2.24	0.53
1:A:75:ASN:HB2	1:A:90:LEU:O	2.09	0.52
1:A:232:GLU:OE1	1:A:232:GLU:O	2.27	0.52
1:A:659:TRP:CE3	1:A:667:THR:HG23	2.44	0.52
1:A:219:ASN:HB2	1:A:308:GLN:HG2	1.90	0.52
1:A:486:VAL:HG12	1:A:487:ASN:ND2	2.24	0.52
1:A:726:VAL:CG1	1:A:728:VAL:HG23	2.33	0.52
1:B:67:GLU:HG3	1:B:79:PHE:O	2.09	0.52
1:A:74:ASN:CB	1:A:92:ASN:HD21	2.14	0.52
1:A:236:ILE:C	1:A:236:ILE:CD1	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:288:THR:CG2	1:A:294:LEU:HD11	2.40	0.52
1:A:331:ASP:HB2	1:A:338:ASN:HD21	1.75	0.52
1:A:760:LYS:HB3	1:A:766:PRO:HD3	1.90	0.52
1:B:431:LEU:HD23	1:B:432:TYR:H	1.73	0.52
1:B:698:VAL:HG12	1:B:699:GLU:N	2.25	0.51
1:A:305:TRP:CZ2	1:A:311:ILE:HD12	2.46	0.51
1:B:594:ILE:CD1	1:B:602:GLU:HG3	2.41	0.51
1:A:177:GLU:HB2	1:A:180:LEU:HD13	1.91	0.51
1:B:357:PHE:O	1:B:358:ARG:HB3	2.11	0.51
1:A:760:LYS:NZ	1:A:766:PRO:HG3	2.25	0.51
1:B:273:THR:CA	1:B:276:LEU:HD22	2.40	0.51
1:B:91:GLU:HG2	1:B:92:ASN:OD1	2.11	0.51
1:A:73:GLU:CG	1:A:74:ASN:N	2.72	0.51
1:B:154:TRP:CE2	1:B:212:SER:HB2	2.46	0.51
1:A:97:GLU:OE1	1:A:133:ASP:OD1	2.29	0.51
1:A:325:MET:HE2	1:A:345:HIS:ND1	2.26	0.51
1:A:463:LYS:HG2	1:A:464:GLU:HG2	1.92	0.51
1:B:549:GLY:O	1:B:552:SER:HB3	2.11	0.51
1:A:73:GLU:CG	1:A:74:ASN:H	2.23	0.51
1:A:340:LEU:N	1:A:340:LEU:HD12	2.26	0.51
1:A:221:THR:O	1:A:273:THR:HB	2.10	0.50
1:A:519:LEU:O	1:A:520:ASN:HB2	2.11	0.50
1:B:357:PHE:CE1	1:B:551:CYS:CB	2.95	0.50
1:B:44:THR:O	1:B:47:ASP:HB2	2.11	0.50
1:B:67:GLU:HG2	1:B:78:VAL:HG13	1.93	0.50
1:A:179:ASN:O	1:A:180:LEU:HD12	2.11	0.50
1:A:198:ILE:HG13	1:A:211:TYR:CD2	2.46	0.50
1:B:696:LYS:HG3	1:B:728:VAL:HG22	1.94	0.50
1:A:55:LEU:CD1	1:A:561:LEU:HD12	2.42	0.50
1:B:276:LEU:O	1:B:276:LEU:HG	2.11	0.50
1:B:582:GLY:CA	1:B:590:ILE:O	2.60	0.50
1:A:109:PRO:HG2	1:A:158:SER:O	2.11	0.49
1:A:626:ILE:O	1:A:650:GLY:HA2	2.11	0.49
1:B:626:ILE:O	1:B:650:GLY:HA2	2.12	0.49
1:A:703:ILE:CD1	1:A:755:MET:HE3	2.43	0.49
1:A:501:ASP:O	1:A:505:GLN:HG2	2.12	0.49
1:A:232:GLU:HB3	1:A:262:VAL:HG11	1.93	0.49
1:B:330:TYR:HB2	1:B:337:TRP:CH2	2.47	0.49
1:A:113:PHE:CE1	1:A:178:PRO:HG2	2.47	0.49
1:A:331:ASP:HB2	1:A:338:ASN:ND2	2.27	0.49
1:A:405:ILE:CD1	1:A:419:SER:CA	2.90	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:664:SER:O	1:B:668:GLU:HB2	2.12	0.49
1:A:317:ARG:HG2	3:A:1019:HOH:O	2.12	0.49
1:B:176:ILE:O	1:B:177:GLU:HG3	2.13	0.49
1:B:415:LEU:C	1:B:415:LEU:HD23	2.34	0.48
1:A:180:LEU:HB3	1:A:181:PRO:HD2	1.94	0.48
1:A:262:VAL:HA	3:A:1005:HOH:O	2.12	0.48
1:B:65:ASP:OD2	1:B:464:GLU:HB2	2.13	0.48
1:B:550:PRO:O	1:B:551:CYS:CB	2.59	0.48
1:B:667:THR:O	1:B:671:MET:HB2	2.12	0.48
1:A:708:ASP:OD2	1:A:740:HIS:HD2	1.96	0.48
1:B:90:LEU:HD22	1:B:140:ARG:HH21	1.77	0.48
1:A:94:THR:HG22	1:A:94:THR:O	2.14	0.48
1:B:110:ASP:CG	1:B:112:GLN:HG3	2.34	0.48
1:B:41:LYS:NZ	1:B:47:ASP:OD1	2.47	0.48
1:B:224:ALA:HB1	1:B:268:PHE:CZ	2.48	0.48
1:B:372:TYR:OH	1:B:436:LEU:HD11	2.14	0.48
1:A:463:LYS:HB2	1:A:463:LYS:HZ3	1.77	0.48
1:B:91:GLU:O	1:B:92:ASN:C	2.52	0.48
1:B:372:TYR:CZ	1:B:386:TYR:HD1	2.32	0.48
1:B:627:TRP:HB2	1:B:651:ILE:HB	1.96	0.48
1:B:55:LEU:HD23	1:B:500:LEU:CD2	2.43	0.48
1:A:110:ASP:OD2	1:A:162:HIS:ND1	2.47	0.48
1:A:618:PHE:CD1	1:A:619:VAL:HG23	2.49	0.47
1:B:435:GLN:HG3	1:B:441:LYS:HB3	1.95	0.47
1:B:542:LEU:HD12	1:B:619:VAL:CG1	2.44	0.47
1:B:698:VAL:CG1	1:B:699:GLU:N	2.77	0.47
1:A:96:ASP:O	1:A:142:LEU:HD11	2.15	0.47
1:A:405:ILE:HD13	1:A:429:ARG:HD3	1.95	0.47
1:B:156:THR:HG21	1:B:214:LEU:CD1	2.44	0.47
1:B:519:LEU:HD13	1:B:608:GLU:CD	2.34	0.47
1:A:346:ILE:C	1:A:346:ILE:HD12	2.35	0.47
1:B:145:GLU:O	1:B:147:ARG:HG3	2.13	0.47
1:A:321:ASN:H	1:A:321:ASN:ND2	2.04	0.47
1:B:411:THR:CG2	1:B:414:TYR:H	2.22	0.47
1:B:726:VAL:O	1:B:726:VAL:CG1	2.63	0.47
1:A:517:ILE:HG22	1:A:518:ILE:N	2.28	0.47
1:A:639:VAL:O	1:A:642:SER:HB2	2.15	0.47
1:B:145:GLU:H	1:B:145:GLU:HG2	1.49	0.47
1:B:171:ASP:CB	1:B:186:THR:HG22	2.43	0.47
1:B:341:VAL:HG13	1:B:343:ARG:H	1.80	0.47
1:B:350:THR:HG21	3:B:866:HOH:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:542:LEU:HD12	1:B:619:VAL:HG11	1.97	0.47
1:A:60:LEU:HD12	1:A:60:LEU:O	2.15	0.47
1:B:693:GLU:O	1:B:696:LYS:HD3	2.15	0.47
1:A:598:LEU:CD1	1:A:659:TRP:CZ2	2.98	0.47
1:A:236:ILE:HD12	1:A:238:TYR:CD2	2.47	0.47
1:B:556:ASP:C	1:B:556:ASP:OD1	2.54	0.47
1:A:135:TYR:CE1	1:A:140:ARG:C	2.89	0.46
1:A:179:ASN:C	1:A:180:LEU:HD12	2.35	0.46
1:A:505:GLN:HE21	1:A:505:GLN:HA	1.79	0.46
1:B:514:LEU:HD21	1:B:525:TRP:CZ3	2.51	0.46
1:B:219:ASN:HB3	1:B:221:THR:OG1	2.16	0.46
1:A:405:ILE:CD1	1:A:418:ILE:HG22	2.44	0.46
1:A:449:LEU:HD23	1:A:449:LEU:HA	1.82	0.46
1:B:36:THR:HG22	3:B:1026:HOH:O	2.15	0.46
1:B:357:PHE:CE2	1:B:551:CYS:HB2	2.46	0.46
1:B:518:ILE:HA	1:B:522:THR:O	2.15	0.46
1:A:288:THR:HG22	1:A:289:ALA:O	2.15	0.46
1:A:346:ILE:H	1:A:392:LYS:NZ	2.12	0.46
1:A:340:LEU:HD12	1:A:340:LEU:H	1.81	0.46
1:B:759:ILE:HD13	1:B:759:ILE:HA	1.80	0.46
1:A:325:MET:CE	1:A:345:HIS:ND1	2.78	0.46
1:A:446:SER:HB2	1:A:457:TYR:CE1	2.49	0.46
1:A:602:GLU:CD	1:A:631:TYR:HH	2.18	0.46
1:B:292:SER:OG	1:B:322:TYR:HE1	1.98	0.46
1:B:431:LEU:CD2	1:B:431:LEU:C	2.83	0.46
1:B:563:TRP:CH2	1:B:755:MET:CE	2.99	0.46
1:B:113:PHE:CE2	1:B:162:HIS:CD2	2.96	0.46
1:B:463:LYS:HG3	1:B:464:GLU:OE2	2.15	0.46
1:B:582:GLY:HA2	1:B:590:ILE:O	2.16	0.46
1:A:317:ARG:CZ	3:A:875:HOH:O	2.62	0.46
1:B:518:ILE:O	1:B:518:ILE:CG1	2.64	0.46
1:B:90:LEU:CD2	1:B:140:ARG:HH21	2.30	0.45
1:B:302:ASP:N	1:B:302:ASP:OD1	2.49	0.45
1:B:411:THR:HG23	1:B:413:ASP:N	2.29	0.45
1:A:113:PHE:CZ	1:A:178:PRO:HG2	2.49	0.45
1:B:44:THR:HG22	1:B:47:ASP:OD1	2.16	0.45
1:A:532:PRO:O	1:A:533:HIS:HB2	2.17	0.45
1:B:664:SER:HB2	1:B:668:GLU:OE2	2.16	0.45
1:B:357:PHE:CE1	1:B:551:CYS:HB3	2.51	0.45
1:B:372:TYR:OH	1:B:436:LEU:CD1	2.64	0.45
1:B:78:VAL:HG23	1:B:89:PHE:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:ASP:OD2	1:A:66:HIS:HD2	2.00	0.45
1:A:319:ILE:O	1:A:321:ASN:ND2	2.47	0.45
1:B:330:TYR:HB2	1:B:337:TRP:CZ3	2.52	0.45
1:A:74:ASN:O	1:A:92:ASN:ND2	2.50	0.45
1:A:659:TRP:HE3	1:A:667:THR:HG23	1.82	0.45
1:A:71:LYS:CE	1:A:105:TYR:OH	2.65	0.45
1:B:471:ARG:HG3	1:B:480:TYR:HE2	1.81	0.45
1:B:306:ALA:O	1:B:307:THR:HG22	2.17	0.44
1:B:487:ASN:OD1	1:B:489:LYS:NZ	2.42	0.44
1:A:194:ILE:HD12	2:A:853:NAG:H82	1.99	0.44
1:B:110:ASP:OD1	1:B:110:ASP:C	2.56	0.44
1:B:435:GLN:HG3	1:B:441:LYS:CB	2.47	0.44
1:A:301:CYS:SG	1:A:316:LEU:CB	3.05	0.44
1:B:350:THR:HG23	1:B:351:THR:N	2.31	0.44
1:A:96:ASP:O	1:A:142:LEU:HD12	2.18	0.44
1:A:118:TYR:O	1:A:119:ASN:HB2	2.18	0.44
1:B:492:ARG:CG	3:B:939:HOH:O	2.46	0.44
1:A:94:THR:CG2	1:A:102:ILE:HD11	2.45	0.44
1:B:75:ASN:OD1	1:B:91:GLU:HG3	2.17	0.44
1:B:219:ASN:HB3	1:B:221:THR:H	1.82	0.44
1:B:369:ASN:HB3	1:B:389:ILE:CD1	2.48	0.44
1:B:608:GLU:HA	1:B:611:ARG:HB2	2.00	0.44
1:A:623:ARG:NH1	1:A:623:ARG:CG	2.71	0.44
1:B:111:GLY:C	1:B:137:LEU:HD12	2.37	0.44
1:B:136:ASP:HB2	1:B:139:LYS:O	2.18	0.44
1:B:165:ALA:HB2	1:B:216:TRP:CZ2	2.52	0.44
1:B:350:THR:CG2	1:B:351:THR:HG23	2.27	0.44
1:B:550:PRO:O	1:B:551:CYS:HB2	2.17	0.44
1:A:463:LYS:NZ	1:A:463:LYS:CB	2.69	0.44
1:B:44:THR:CG2	1:B:47:ASP:H	2.26	0.43
1:B:614:SER:OG	1:B:624:ILE:HD11	2.17	0.43
1:A:60:LEU:HD12	1:A:60:LEU:C	2.38	0.43
1:A:143:ILE:CD1	1:A:178:PRO:CB	2.96	0.43
1:B:214:LEU:HD12	1:B:214:LEU:C	2.38	0.43
1:A:624:ILE:HG22	1:A:647:PHE:CD1	2.53	0.43
1:A:724:VAL:HG12	1:B:746:THR:HG21	1.95	0.43
1:B:434:ILE:HA	1:B:441:LYS:O	2.19	0.43
1:A:623:ARG:HH11	1:A:623:ARG:CG	2.09	0.43
1:A:532:PRO:O	1:A:533:HIS:CB	2.67	0.43
1:A:703:ILE:HD12	1:A:755:MET:HE2	2.01	0.43
1:B:236:ILE:HG12	1:B:712:HIS:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:466:LYS:HG2	1:B:467:TYR:CE2	2.53	0.43
1:A:248:TYR:CZ	1:B:234:PRO:HB2	2.53	0.43
1:A:669:ARG:HD2	1:A:670:TYR:CZ	2.53	0.43
1:A:725:ASP:HA	1:B:746:THR:CG2	2.44	0.43
1:B:69:LEU:HD21	1:B:76:ILE:HG21	2.01	0.43
1:A:303:VAL:HB	1:A:313:LEU:HD23	2.01	0.43
1:A:307:THR:HB	3:A:982:HOH:O	2.18	0.43
1:B:369:ASN:O	1:B:389:ILE:HG12	2.19	0.43
1:B:391:LYS:O	1:B:392:LYS:CB	2.67	0.43
1:B:190:LYS:HD2	1:B:193:ILE:CD1	2.45	0.43
1:B:341:VAL:HG13	1:B:343:ARG:N	2.34	0.43
1:A:424:GLY:O	1:A:426:PRO:HD3	2.18	0.42
1:A:706:THR:OG1	1:A:736:THR:HA	2.19	0.42
1:B:411:THR:C	1:B:413:ASP:H	2.23	0.42
1:B:278:SER:HB3	1:B:281:ASN:O	2.19	0.42
1:B:422:TYR:CE1	1:B:423:LYS:HG3	2.54	0.42
1:A:472:CYS:O	1:A:478:PRO:HA	2.19	0.42
1:A:489:LYS:HA	1:A:489:LYS:HD3	1.84	0.42
1:B:669:ARG:HD2	1:B:670:TYR:CZ	2.55	0.42
1:A:244:GLU:OE2	1:B:658:ARG:NH2	2.49	0.42
1:B:180:LEU:CB	1:B:181:PRO:HD3	2.49	0.42
1:B:375:ILE:HD11	1:B:387:PHE:HZ	1.85	0.42
1:B:60:LEU:CG	1:B:469:GLN:OE1	2.68	0.42
1:B:485:SER:O	1:B:486:VAL:C	2.58	0.42
1:A:514:LEU:HD12	1:A:526:TYR:O	2.20	0.42
1:B:114:ILE:CG2	1:B:140:ARG:HH12	2.29	0.42
1:B:541:PRO:HG3	1:B:623:ARG:CZ	2.49	0.42
1:B:594:ILE:CD1	1:B:601:PHE:HB2	2.49	0.42
1:A:366:LEU:C	1:A:366:LEU:HD23	2.40	0.42
1:B:563:TRP:CZ3	1:B:755:MET:CE	3.03	0.42
1:B:88:VAL:CG1	1:B:91:GLU:HB2	2.49	0.42
1:B:109:PRO:HG2	1:B:158:SER:O	2.20	0.42
1:B:341:VAL:CG2	1:B:342:ALA:N	2.77	0.42
1:A:509:MET:HA	1:A:510:PRO:HD3	1.90	0.41
1:A:581:ARG:HA	1:A:582:GLY:HA2	1.75	0.41
1:B:582:GLY:HA3	1:B:591:MET:HA	2.02	0.41
1:B:382:ARG:HH21	1:B:591:MET:HE2	1.85	0.41
1:B:431:LEU:CD2	1:B:445:LEU:HD12	2.48	0.41
1:B:60:LEU:HD12	1:B:60:LEU:O	2.20	0.41
1:B:306:ALA:O	1:B:307:THR:CG2	2.68	0.41
1:B:422:TYR:CD1	1:B:423:LYS:HG3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:317:ARG:NE	3:A:875:HOH:O	2.53	0.41
1:A:428:GLY:C	1:A:429:ARG:HG2	2.40	0.41
1:B:594:ILE:HD12	1:B:594:ILE:HA	1.94	0.41
1:B:269:PHE:CE2	1:B:286:GLN:HB2	2.55	0.41
1:B:369:ASN:HB2	1:B:389:ILE:HG12	2.02	0.41
1:A:470:LEU:HD12	1:A:483:HIS:NE2	2.36	0.41
1:B:57:LEU:O	1:B:58:TYR:C	2.58	0.41
1:B:375:ILE:HD11	1:B:387:PHE:CZ	2.56	0.41
1:A:219:ASN:CB	1:A:220:GLY:HA2	2.51	0.41
1:A:483:HIS:HD1	1:A:490:GLY:HA2	1.86	0.41
1:B:156:THR:HG23	1:B:156:THR:O	2.19	0.41
1:B:471:ARG:HG3	1:B:480:TYR:CE2	2.56	0.41
1:B:237:GLU:HA	1:B:252:VAL:O	2.21	0.41
1:B:330:TYR:HE2	1:B:332:GLU:HG2	1.86	0.41
1:B:449:LEU:HA	1:B:449:LEU:HD23	1.85	0.41
1:B:498:SER:O	1:B:502:LYS:HG3	2.21	0.41
1:B:693:GLU:HA	1:B:726:VAL:HG11	2.03	0.41
1:A:41:LYS:CE	1:A:53:TYR:OH	2.67	0.41
1:A:613:PHE:O	1:A:616:MET:HG2	2.21	0.41
1:B:157:TRP:CE3	1:B:164:LEU:HG	2.55	0.41
1:B:158:SER:HB3	1:B:163:LYS:HB3	2.02	0.41
1:B:422:TYR:O	1:B:423:LYS:HB2	2.20	0.41
1:B:369:ASN:HB3	1:B:389:ILE:HD11	2.02	0.41
1:A:259:ALA:HB3	1:A:660:GLU:HA	2.02	0.40
1:B:741:GLY:O	1:B:742:ILE:C	2.60	0.40
1:A:193:ILE:HD12	3:A:1071:HOH:O	2.20	0.40
1:B:452:GLU:H	1:B:452:GLU:HG3	1.71	0.40
1:B:492:ARG:HD3	3:B:939:HOH:O	2.20	0.40
1:B:597:ARG:HA	1:B:682:HIS:NE2	2.35	0.40
1:B:680:LEU:O	1:B:683:TYR:HB2	2.22	0.40
1:A:361:GLU:OE1	3:A:855:HOH:O	2.22	0.40
1:A:765:LEU:HD23	1:A:765:LEU:HA	1.79	0.40
1:A:760:LYS:HE3	1:A:766:PRO:CG	2.45	0.40
1:B:214:LEU:HD12	1:B:214:LEU:O	2.22	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1043:HOH:O	3:B:1054:HOH:O[3_555]	1.53	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:98:PHE:CZ	1:B:168:TRP:CZ3[1_455]	1.81	0.39
1:A:83:TYR:CD1	1:A:677:GLU:OE1[1_455]	1.89	0.31
1:B:642:SER:O	3:B:1017:HOH:O[1_455]	1.91	0.29
1:A:98:PHE:CZ	1:B:168:TRP:CH2[1_455]	2.12	0.08

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	726/731 (99%)	678 (93%)	45 (6%)	3 (0%)	30	22
1	B	721/731 (99%)	667 (92%)	47 (6%)	7 (1%)	13	5
All	All	1447/1462 (99%)	1345 (93%)	92 (6%)	10 (1%)	19	11

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	140	ARG
1	B	140	ARG
1	B	341	VAL
1	A	98	PHE
1	B	274	ASP
1	A	73	GLU
1	B	58	TYR
1	B	145	GLU
1	B	520	ASN
1	B	486	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	653/655 (100%)	596 (91%)	57 (9%)	8	3
1	B	647/655 (99%)	595 (92%)	52 (8%)	10	4
All	All	1300/1310 (99%)	1191 (92%)	109 (8%)	9	3

All (109) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	39	SER
1	A	41	LYS
1	A	54	ARG
1	A	61	ARG
1	A	65	ASP
1	A	75	ASN
1	A	92	ASN
1	A	95	PHE
1	A	116	LEU
1	A	190	LYS
1	A	193	ILE
1	A	198	ILE
1	A	209	SER
1	A	214	LEU
1	A	219	ASN
1	A	230	ASP
1	A	232	GLU
1	A	236	ILE
1	A	246	LEU
1	A	250	LYS
1	A	270	VAL
1	A	273	THR
1	A	277	SER
1	A	302	ASP
1	A	308	GLN
1	A	314	GLN
1	A	321	ASN
1	A	333	SER
1	A	346	ILE
1	A	349	SER
1	A	367	ASP
1	A	376	SER
1	A	385	CYS

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Mol	Chain	Res	Type
1	A	392	LYS
1	A	414	TYR
1	A	440	THR
1	A	472	CYS
1	A	488	ASP
1	A	489	LYS
1	A	513	LYS
1	A	518	ILE
1	A	521	GLU
1	A	537	SER
1	A	542	LEU
1	A	543	LEU
1	A	566	TYR
1	A	602	GLU
1	A	612	GLN
1	A	623	ARG
1	A	642	SER
1	A	684	ARG
1	A	693	GLU
1	A	699	GLU
1	A	704	HIS
1	A	736	THR
1	A	749	GLN
1	A	753	THR
1	B	36	THR
1	B	51	ASN
1	B	54	ARG
1	B	59	SER
1	B	69	LEU
1	B	72	GLN
1	B	85	ASN
1	B	116	LEU
1	B	145	GLU
1	B	162	HIS
1	B	179	ASN
1	B	186	THR
1	B	207	VAL
1	B	237	GLU
1	B	251	THR
1	B	263	ASN
1	B	266	VAL
1	B	270	VAL

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Mol	Chain	Res	Type
1	B	274	ASP
1	B	319	ILE
1	B	326	ASP
1	B	334	SER
1	B	358	ARG
1	B	360	SER
1	B	361	GLU
1	B	385	CYS
1	B	399	LYS
1	B	431	LEU
1	B	472	CYS
1	B	484	SER
1	B	485	SER
1	B	488	ASP
1	B	502	LYS
1	B	505	GLN
1	B	506	ASN
1	B	514	LEU
1	B	517	ILE
1	B	543	LEU
1	B	554	LYS
1	B	557	THR
1	B	597	ARG
1	B	602	GLU
1	B	608	GLU
1	B	614	SER
1	B	616	MET
1	B	642	SER
1	B	667	THR
1	B	677	GLU
1	B	701	LEU
1	B	746	THR
1	B	749	GLN
1	B	759	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (33) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	66	HIS
1	A	92	ASN
1	A	112	GLN
1	A	179	ASN

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Mol	Chain	Res	Type
1	A	263	ASN
1	A	314	GLN
1	A	321	ASN
1	A	338	ASN
1	A	383	HIS
1	A	388	GLN
1	A	435	GLN
1	A	487	ASN
1	A	505	GLN
1	A	572	ASN
1	A	595	ASN
1	A	612	GLN
1	A	740	HIS
1	B	51	ASN
1	B	112	GLN
1	B	119	ASN
1	B	179	ASN
1	B	263	ASN
1	B	298	HIS
1	B	320	GLN
1	B	338	ASN
1	B	383	HIS
1	B	435	GLN
1	B	455	GLN
1	B	505	GLN
1	B	606	GLN
1	B	612	GLN
1	B	712	HIS
1	B	749	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
2	NAG	B	855	1	14,14,15	0.55	0	17,19,21	0.69	0
2	NAG	B	852	1	14,14,15	0.55	0	17,19,21	0.73	0
2	NAG	A	851	1	14,14,15	0.60	0	17,19,21	0.75	0
2	NAG	A	853	1	14,14,15	0.53	0	17,19,21	0.96	1 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	B	855	1	-	2/6/23/26	0/1/1/1
2	NAG	B	852	1	-	0/6/23/26	0/1/1/1
2	NAG	A	851	1	-	0/6/23/26	0/1/1/1
2	NAG	A	853	1	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	853	NAG	O5-C1-C2	-2.50	107.42	111.29

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	855	NAG	C4-C5-C6-O6
2	B	855	NAG	O5-C5-C6-O6
2	A	853	NAG	C4-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
2	A	853	NAG	O5-C5-C6-O6

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	855	NAG	1	0
2	A	853	NAG	1	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	728/731 (99%)	0.99	91 (12%)	9	9	14, 40, 55, 60	0
1	B	725/731 (99%)	1.18	138 (19%)	4	3	17, 43, 64, 72	0
All	All	1453/1462 (99%)	1.08	229 (15%)	6	5	14, 41, 59, 72	0

All (229) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	96	ASP	11.7
1	A	95	PHE	10.8
1	A	94	THR	8.4
1	A	766	PRO	6.5
1	B	340	LEU	6.3
1	A	98	PHE	6.0
1	B	279	VAL	5.9
1	A	127	SER	5.8
1	B	341	VAL	5.8
1	B	436	LEU	5.6
1	B	99	GLY	5.4
1	A	414	TYR	5.3
1	A	584	GLY	5.1
1	B	278	SER	5.0
1	B	385	CYS	4.9
1	B	339	CYS	4.7
1	A	74	ASN	4.7
1	A	121	VAL	4.6
1	B	137	LEU	4.6
1	A	99	GLY	4.5
1	B	134	ILE	4.4
1	B	608	GLU	4.4
1	A	301	CYS	4.3
1	B	342	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
1	A	97	GLU	4.3
1	B	334	SER	4.2
1	A	280	THR	4.2
1	A	333	SER	4.1
1	B	183	TYR	4.1
1	A	449	LEU	4.1
1	B	449	LEU	4.0
1	B	92	ASN	4.0
1	B	486	VAL	4.0
1	B	378	GLU	4.0
1	B	140	ARG	3.9
1	B	142	LEU	3.9
1	B	83	TYR	3.9
1	B	337	TRP	3.9
1	B	551	CYS	3.9
1	B	74	ASN	3.8
1	A	602	GLU	3.8
1	B	394	CYS	3.8
1	B	393	ASP	3.8
1	B	517	ILE	3.8
1	B	520	ASN	3.8
1	B	367	ASP	3.8
1	A	551	CYS	3.8
1	B	667	THR	3.7
1	B	67	GLU	3.7
1	A	274	ASP	3.7
1	B	351	THR	3.7
1	B	471	ARG	3.6
1	B	488	ASP	3.6
1	B	136	ASP	3.6
1	B	301	CYS	3.6
1	B	452	GLU	3.5
1	A	659	TRP	3.5
1	A	105	TYR	3.5
1	A	616	MET	3.5
1	A	259	ALA	3.4
1	A	146	GLU	3.4
1	B	143	ILE	3.4
1	B	447	CYS	3.3
1	B	84	GLY	3.3
1	A	385	CYS	3.3
1	A	145	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
1	B	276	LEU	3.3
1	B	138	ASN	3.3
1	B	220	GLY	3.3
1	B	444	CYS	3.2
1	A	129	THR	3.2
1	B	108	SER	3.2
1	A	677	GLU	3.2
1	A	278	SER	3.2
1	A	535	ASP	3.2
1	B	437	SER	3.2
1	B	518	ILE	3.1
1	B	309	GLU	3.1
1	A	615	LYS	3.1
1	B	69	LEU	3.1
1	A	134	ILE	3.1
1	A	762	CYS	3.0
1	B	762	CYS	3.0
1	B	88	VAL	3.0
1	A	472	CYS	3.0
1	A	295	ILE	3.0
1	B	176	ILE	3.0
1	B	111	GLY	3.0
1	B	335	GLY	3.0
1	A	123	GLN	3.0
1	A	140	ARG	3.0
1	A	275	SER	2.9
1	B	350	THR	2.9
1	B	162	HIS	2.9
1	B	463	LYS	2.9
1	B	682	HIS	2.9
1	B	445	LEU	2.9
1	B	186	THR	2.8
1	B	387	PHE	2.8
1	A	73	GLU	2.8
1	A	220	GLY	2.8
1	B	391	LYS	2.8
1	B	116	LEU	2.8
1	B	181	PRO	2.8
1	A	413	ASP	2.8
1	B	438	ASP	2.8
1	A	463	LYS	2.8
1	B	389	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	642	SER	2.8
1	A	126	HIS	2.7
1	B	376	SER	2.7
1	B	120	TYR	2.7
1	A	124	TRP	2.7
1	A	518	ILE	2.7
1	A	219	ASN	2.6
1	B	281	ASN	2.6
1	A	617	GLY	2.6
1	B	65	ASP	2.6
1	B	274	ASP	2.6
1	A	379	GLU	2.6
1	B	44	THR	2.6
1	B	330	TYR	2.6
1	B	104	ASP	2.6
1	B	519	LEU	2.6
1	A	279	VAL	2.6
1	B	187	TRP	2.6
1	B	216	TRP	2.6
1	A	151	ASN	2.6
1	A	139	LYS	2.5
1	B	121	VAL	2.5
1	B	151	ASN	2.5
1	A	116	LEU	2.5
1	A	501	ASP	2.5
1	B	66	HIS	2.5
1	B	331	ASP	2.5
1	B	336	ARG	2.5
1	A	394	CYS	2.5
1	B	629	TRP	2.5
1	B	277	SER	2.5
1	B	133	ASP	2.5
1	B	522	THR	2.5
1	A	761	GLN	2.5
1	A	183	TYR	2.5
1	B	135	TYR	2.5
1	B	91	GLU	2.5
1	A	367	ASP	2.5
1	B	413	ASP	2.5
1	B	219	ASN	2.5
1	A	130	ALA	2.4
1	B	685	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	392	LYS	2.4
1	B	146	GLU	2.4
1	B	282	ALA	2.4
1	A	537	SER	2.4
1	A	447	CYS	2.4
1	B	448	GLU	2.4
1	B	346	ILE	2.4
1	A	66	HIS	2.4
1	B	698	VAL	2.4
1	B	480	TYR	2.4
1	B	666	TYR	2.4
1	A	75	ASN	2.3
1	B	366	LEU	2.3
1	B	354	VAL	2.3
1	B	338	ASN	2.3
1	A	542	LEU	2.3
1	B	297	ASP	2.3
1	B	328	CYS	2.3
1	B	472	CYS	2.3
1	A	348	MET	2.3
1	B	616	MET	2.3
1	B	110	ASP	2.3
1	A	346	ILE	2.3
1	B	145	GLU	2.3
1	B	177	GLU	2.3
1	B	180	LEU	2.3
1	B	81	ALA	2.2
1	A	314	GLN	2.2
1	B	100	HIS	2.2
1	B	324	VAL	2.2
1	B	89	PHE	2.2
1	B	462	SER	2.2
1	B	115	LEU	2.2
1	A	308	GLN	2.2
1	A	699	GLU	2.2
1	B	280	THR	2.2
1	A	393	ASP	2.2
1	A	101	SER	2.2
1	B	396	PHE	2.2
1	A	281	ASN	2.2
1	A	539	LYS	2.2
1	B	85	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	213	ALA	2.2
1	B	270	VAL	2.2
1	B	139	LYS	2.2
1	B	516	PHE	2.2
1	A	383	HIS	2.2
1	B	766	PRO	2.2
1	B	76	ILE	2.2
1	B	319	ILE	2.2
1	A	230	ASP	2.1
1	A	520	ASN	2.1
1	B	450	ASN	2.1
1	A	125	ARG	2.1
1	B	178	PRO	2.1
1	B	292	SER	2.1
1	B	161	GLY	2.1
1	B	302	ASP	2.1
1	B	407	ILE	2.1
1	A	425	MET	2.1
1	A	464	GLU	2.1
1	A	88	VAL	2.1
1	A	726	VAL	2.1
1	A	618	PHE	2.1
1	B	82	GLU	2.1
1	B	469	GLN	2.1
1	B	128	TYR	2.1
1	B	501	ASP	2.0
1	A	504	LEU	2.0
1	A	534	PHE	2.0
1	A	642	SER	2.0
1	A	102	ILE	2.0
1	A	350	THR	2.0
1	A	506	ASN	2.0
1	A	596	ARG	2.0
1	A	177	GLU	2.0
1	A	442	VAL	2.0
1	B	514	LEU	2.0
1	A	92	ASN	2.0

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

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(Å^2)	Q<0.9
2	NAG	B	855	14/15	0.63	0.20	68,69,69,69	0
2	NAG	B	852	14/15	0.80	0.11	42,42,44,45	0
2	NAG	A	853	14/15	0.80	0.11	42,43,43,44	0
2	NAG	A	851	14/15	0.88	0.09	48,48,49,49	0

6.5 Other polymers (i)

There are no such residues in this entry.