Full wwPDB X-ray Structure Validation Report ⓘ

Apr 21, 2024 – 05:54 am BST

PDB ID	:	2J0X
Title	:	CRYSTAL STRUCTURE OF E. COLI ASPARTOKINASE III IN COMPLEX WITH LYSINE AND ASPARTATE (T-STATE)
Authors	:	Kotaka, M.; Ren, J.; Lockyer, M.; Hawkins, A.R.; Stammers, D.K.
Deposited on	:	2006-08-07
Resolution	:	2.80 Å(reported)

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

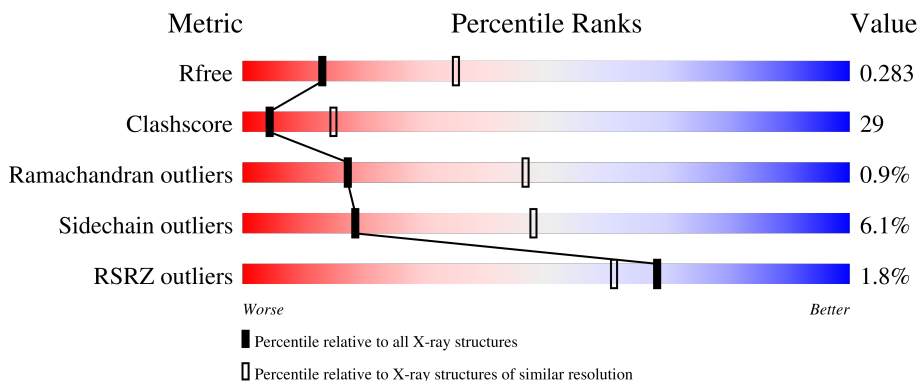|		
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36.2
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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.

| | 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}	130704	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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.

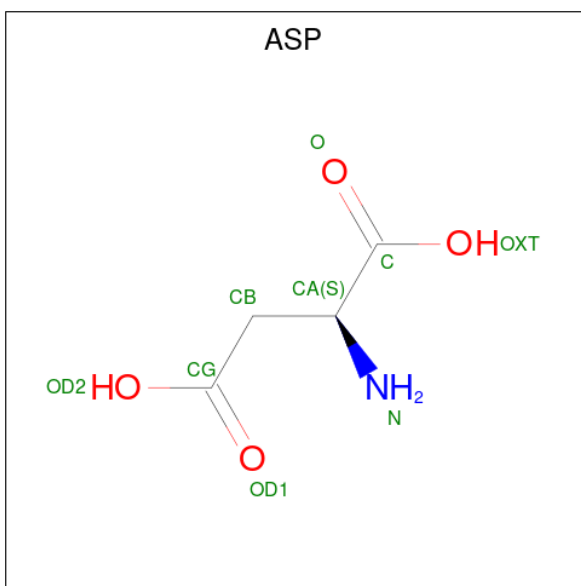| Mol	Chain	Length	Quality of chain
1	A	449	2% / 53% 42% •
1	B	449	% / 55% 40% • •

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 6915 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 LYSINE-SENSITIVE ASPARTOKINASE 3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	447	Total	C	N	O	S	0	0	0
			3396	2142	590	652	12			
1	B	445	Total	C	N	O	S	0	0	0
			3385	2136	588	649	12			

- Molecule 2 is ASPARTIC ACID (three-letter code: ASP) (formula: $C_4H_7NO_4$).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			9	4	1	4		

- Molecule 3 is LYSINE (three-letter code: LYS) (formula: $C_6H_{15}N_2O_2$).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 10	C 6	N 2	O 2	0	0
3	B	1	Total 10	C 6	N 2	O 2	0	0

• Molecule 4 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).
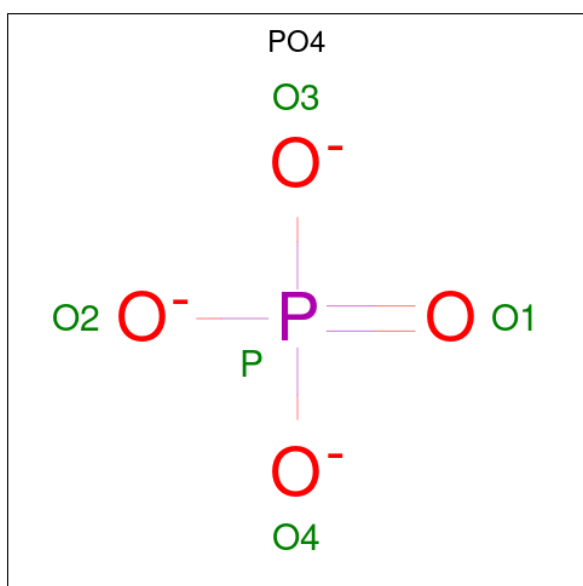
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 5	O 4	P 1	0	0

• Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	51	Total 51	O 51	0	0
5	B	49	Total 49	O 49	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: LYSINE-SENSITIVE ASPARTOKINASE 3
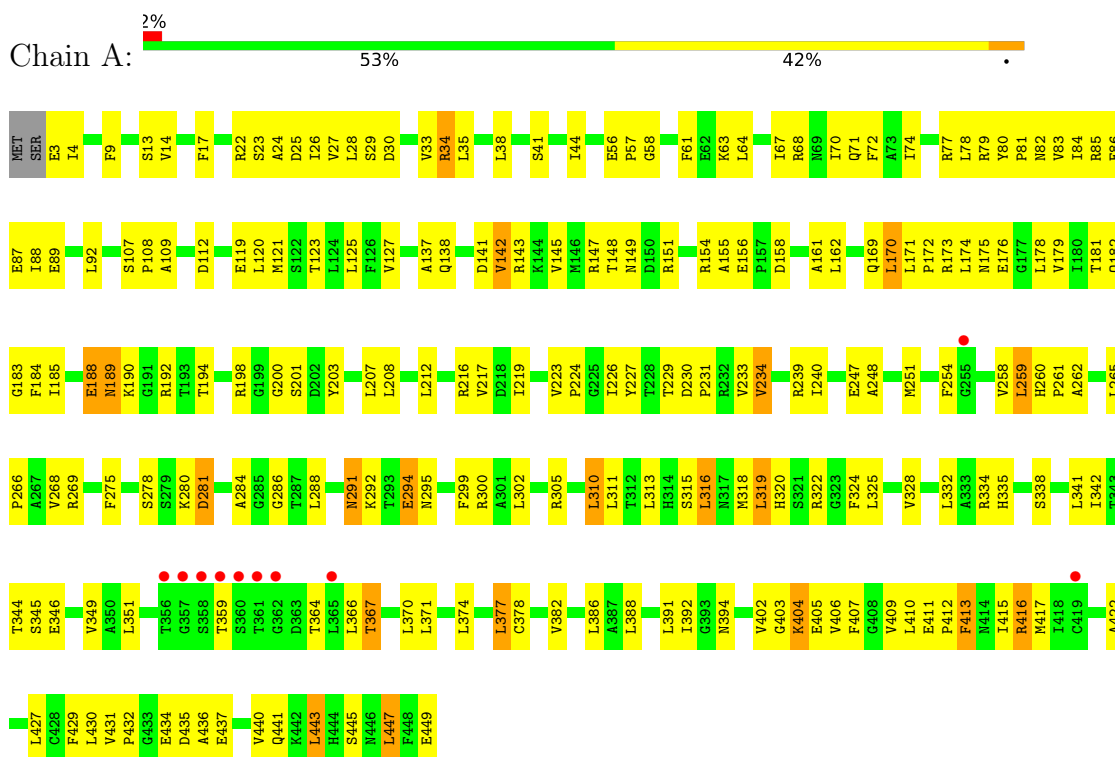
• Molecule 1: LYSINE-SENSITIVE ASPARTOKINASE 3
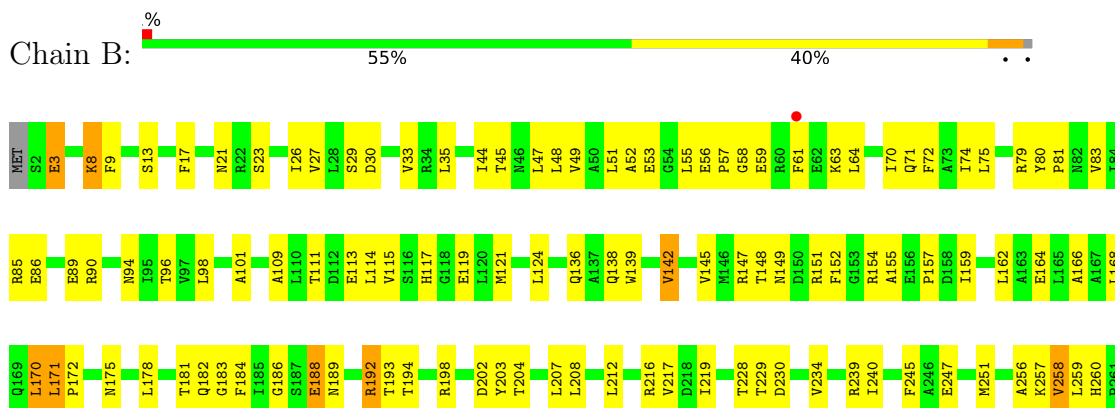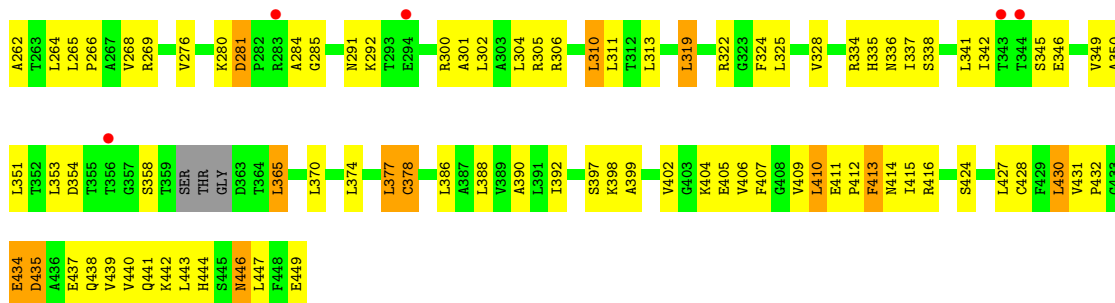
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	171.75Å 148.02Å 42.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.73 – 2.80 29.73 – 2.80	Depositor EDS
% Data completeness (in resolution range)	94.8 (29.73-2.80) 94.9 (29.73-2.80)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.69 (at 2.80Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.215 , 0.283 0.215 , 0.283	Depositor DCC
R_{free} test set	1278 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å^2)	44.7	Xtriage
Anisotropy	0.556	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 57.3	EDS
L-test for twinning[2]	$< |L| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	6915	wwPDB-VP
Average B, all atoms (Å^2)	39.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.68% 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 $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: PO4

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	0.35	0/3444	0.63	0/4677
1	B	0.36	0/3432	0.64	0/4659
All	All	0.36	0/6876	0.64	0/9336

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3396	0	3458	218	0
1	B	3385	0	3447	196	0
2	A	9	0	3	1	0
3	A	10	0	12	0	0
3	B	10	0	12	1	0
4	A	5	0	0	0	0
5	A	51	0	0	4	0
5	B	49	0	0	1	0
All	All	6915	0	6932	395	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 29.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

All (395) 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:145:VAL:HG12	1:A:162:LEU:HD12	1.43	1.00
1:B:145:VAL:HG12	1:B:162:LEU:HD12	1.43	0.98
1:B:353:LEU:HD13	1:B:365:LEU:HD22	1.46	0.95
1:A:258:VAL:HG12	1:A:259:LEU:H	1.33	0.91
1:B:302:LEU:HD11	1:B:440:VAL:HG13	1.50	0.90
1:A:82:ASN:HA	1:A:85:ARG:HH12	1.33	0.90
1:B:109:ALA:HA	1:B:152:PHE:CD2	2.06	0.90
1:B:434:GLU:CD	1:B:434:GLU:H	1.79	0.85
1:A:359:THR:HG23	1:B:322:ARG:HH22	1.41	0.84
1:A:35:LEU:HD21	1:A:208:LEU:HD23	1.59	0.83
1:A:359:THR:HG23	1:B:322:ARG:NH2	1.92	0.83
1:A:82:ASN:HA	1:A:85:ARG:NH1	1.94	0.82
1:B:304:LEU:HD21	1:B:306:ARG:HD2	1.62	0.81
1:B:188:GLU:HG2	1:B:189:ASN:N	1.94	0.80
1:B:304:LEU:HD11	1:B:306:ARG:HG3	1.64	0.79
1:B:8:LYS:HE2	1:B:202:ASP:OD1	1.83	0.78
1:A:341:LEU:HD11	1:A:388:LEU:HD13	1.64	0.77
1:B:55:LEU:HD13	1:B:59:GLU:HG2	1.66	0.77
1:B:431:VAL:HG22	1:B:432:PRO:HD2	1.66	0.76
1:A:188:GLU:HG2	1:A:189:ASN:N	2.01	0.76
1:B:446:ASN:H	1:B:446:ASN:ND2	1.84	0.76
1:B:145:VAL:HG12	1:B:162:LEU:CD1	2.15	0.75
1:A:123:THR:HG21	1:A:182:GLN:HG3	1.68	0.74
1:A:239:ARG:HG3	1:A:239:ARG:HH11	1.53	0.72
1:B:80:TYR:O	1:B:83:VAL:HG12	1.89	0.72
1:B:64:LEU:HD21	1:B:96:THR:OG1	1.89	0.72
1:B:203:TYR:O	1:B:207:LEU:HD12	1.89	0.72
1:A:145:VAL:HG12	1:A:162:LEU:CD1	2.20	0.72
1:A:316:LEU:H	1:A:316:LEU:HD22	1.54	0.71
1:B:446:ASN:H	1:B:446:ASN:HD22	1.37	0.71
1:A:137:ALA:HB2	1:A:178:LEU:HD23	1.73	0.71
1:B:446:ASN:HD22	1:B:446:ASN:N	1.87	0.70
1:A:80:TYR:N	1:A:81:PRO:HD3	2.06	0.70
1:A:338:SER:HG	3:B:1450:LYS:N	1.90	0.70
1:A:260:HIS:HD2	1:A:262:ALA:H	1.40	0.70
1:A:34:ARG:HG2	1:A:34:ARG:HH11	1.55	0.70
1:A:201:SER:H	2:A:502:ASP:HB3	1.56	0.69
1:B:124:LEU:HD23	1:B:139:TRP:CD1	2.28	0.69
1:A:260:HIS:CD2	1:A:262:ALA:H	2.10	0.69
1:A:374:LEU:O	1:A:377:LEU:HD23	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:94:ASN:HD22	1:B:117:HIS:CE1	2.12	0.68
1:A:410:LEU:HD22	1:A:429:PHE:CE2	2.29	0.68
1:A:229:THR:HG22	1:A:230:ASP:H	1.59	0.68
1:A:141:ASP:OD1	1:A:143:ARG:HB2	1.94	0.68
1:B:310:LEU:HB2	1:B:386:LEU:HD12	1.74	0.68
1:B:26:ILE:O	1:B:29:SER:HB3	1.95	0.67
1:B:437:GLU:HB2	1:B:438:GLN:NE2	2.10	0.67
1:B:310:LEU:HD21	1:B:350:ALA:HB1	1.76	0.67
1:B:411:GLU:N	1:B:412:PRO:HD2	2.10	0.67
1:B:260:HIS:HD2	1:B:262:ALA:H	1.43	0.67
1:B:148:THR:OG1	1:B:194:THR:HG21	1.95	0.66
1:A:341:LEU:HD11	1:A:388:LEU:CD1	2.26	0.66
1:A:219:ILE:HG21	1:A:259:LEU:HD23	1.78	0.66
1:B:229:THR:HG22	1:B:230:ASP:N	2.10	0.66
1:A:412:PRO:HG2	1:A:413:PHE:CE1	2.31	0.66
1:B:172:PRO:HA	1:B:175:ASN:HD22	1.60	0.66
1:B:251:MET:HG2	1:B:392:ILE:HG12	1.77	0.65
1:A:68:ARG:NH1	1:A:68:ARG:HB2	2.10	0.65
1:B:431:VAL:CG2	1:B:432:PRO:HD2	2.27	0.65
1:A:229:THR:HG22	1:A:230:ASP:N	2.12	0.65
1:A:377:LEU:HD23	1:A:377:LEU:N	2.13	0.65
1:A:416:ARG:HG2	1:A:416:ARG:HH11	1.63	0.64
1:B:341:LEU:HD11	1:B:388:LEU:HD13	1.80	0.64
1:A:83:VAL:HG13	1:A:84:ILE:N	2.13	0.64
1:A:234:VAL:CG2	1:A:234:VAL:O	2.45	0.64
1:A:402:VAL:HG11	1:A:406:VAL:HG21	1.79	0.64
1:A:149:ASN:HD21	1:A:151:ARG:HB2	1.62	0.64
1:B:311:LEU:HD23	1:B:351:LEU:HD11	1.80	0.63
1:A:224:PRO:HB2	1:A:239:ARG:HH22	1.63	0.63
1:A:291:ASN:C	1:A:292:LYS:HD2	2.19	0.62
1:B:392:ILE:HD12	1:B:392:ILE:N	2.14	0.62
1:B:142:VAL:HG21	1:B:182:GLN:O	1.99	0.62
1:A:26:ILE:O	1:A:29:SER:HB3	1.99	0.62
1:A:427:LEU:HD23	1:A:427:LEU:C	2.20	0.62
1:A:83:VAL:HG11	5:A:2017:HOH:O	2.00	0.62
1:A:83:VAL:HG13	1:A:84:ILE:H	1.63	0.61
1:A:402:VAL:HG11	1:A:406:VAL:CG2	2.29	0.61
1:B:434:GLU:OE1	1:B:434:GLU:N	2.33	0.61
1:B:402:VAL:HG11	1:B:406:VAL:HB	1.83	0.61
1:A:149:ASN:ND2	1:A:151:ARG:HB2	2.16	0.61
1:B:258:VAL:HG12	1:B:259:LEU:HG	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:265:LEU:HD12	1:A:265:LEU:O	2.00	0.61
1:B:49:VAL:O	1:B:53:GLU:HG3	2.00	0.61
1:B:117:HIS:O	1:B:121:MET:HG3	2.01	0.60
1:A:254:PHE:O	1:A:258:VAL:HB	2.00	0.60
1:B:45:THR:O	1:B:49:VAL:HG23	2.01	0.60
1:B:234:VAL:HG21	1:B:444:HIS:CD2	2.36	0.60
1:A:188:GLU:OE2	1:A:190:LYS:HB2	2.02	0.60
5:A:2045:HOH:O	1:B:399:ALA:HB1	2.00	0.60
1:B:159:ILE:HD12	1:B:159:ILE:H	1.67	0.59
1:B:337:ILE:HG12	1:B:365:LEU:HD21	1.84	0.59
1:B:313:LEU:HD22	1:B:378:CYS:SG	2.42	0.59
1:A:265:LEU:HA	1:A:268:VAL:HG22	1.83	0.59
1:B:310:LEU:HB2	1:B:386:LEU:CD1	2.32	0.59
1:A:14:VAL:HG11	1:A:38:LEU:HD13	1.83	0.59
1:A:198:ARG:HG3	1:A:198:ARG:HH11	1.68	0.59
1:B:64:LEU:HD11	1:B:96:THR:HA	1.85	0.59
1:B:186:GLY:C	1:B:194:THR:HG22	2.23	0.59
1:B:412:PRO:HG2	1:B:413:PHE:CE1	2.37	0.59
1:A:258:VAL:HG12	1:A:259:LEU:N	2.13	0.59
1:B:409:VAL:HG13	1:B:447:LEU:HD11	1.85	0.59
1:A:316:LEU:H	1:A:316:LEU:CD2	2.15	0.58
1:B:183:GLY:O	1:B:184:PHE:HB3	2.03	0.58
1:B:437:GLU:O	1:B:441:GLN:HG3	2.04	0.58
1:B:438:GLN:HB3	1:B:442:LYS:HE3	1.86	0.58
1:B:280:LYS:O	1:B:280:LYS:HG2	2.04	0.58
1:B:377:LEU:N	1:B:377:LEU:HD23	2.18	0.58
1:A:148:THR:HB	1:A:155:ALA:HB1	1.84	0.58
1:B:57:PRO:O	1:B:61:PHE:HD1	1.87	0.57
1:B:159:ILE:HD12	1:B:159:ILE:N	2.20	0.57
1:B:435:ASP:O	1:B:439:VAL:HG23	2.05	0.57
1:B:377:LEU:O	1:B:378:CYS:HB3	2.03	0.57
1:B:113:GLU:HG2	1:B:193:THR:HB	1.86	0.57
1:A:84:ILE:HG23	1:A:85:ARG:N	2.20	0.57
1:A:434:GLU:H	1:A:434:GLU:CD	2.07	0.57
1:A:319:LEU:HB3	1:B:260:HIS:CE1	2.40	0.56
1:A:443:LEU:HD23	1:A:447:LEU:HD22	1.88	0.56
1:B:30:ASP:O	1:B:33:VAL:HG12	2.05	0.56
1:B:229:THR:HG22	1:B:230:ASP:H	1.70	0.56
1:A:142:VAL:HG13	1:A:181:THR:OG1	2.05	0.56
1:A:351:LEU:H	1:A:351:LEU:HD23	1.68	0.56
1:A:416:ARG:HG2	1:A:416:ARG:NH1	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:422:ALA:HB3	1:B:345:SER:HB3	1.86	0.56
1:A:233:VAL:HG13	1:A:437:GLU:HG2	1.87	0.56
1:A:27:VAL:HG13	1:A:33:VAL:HG21	1.88	0.56
1:A:412:PRO:HG2	1:A:413:PHE:CZ	2.40	0.55
1:A:311:LEU:HD12	1:A:382:VAL:HG22	1.86	0.55
1:B:142:VAL:HG22	1:B:181:THR:OG1	2.06	0.55
1:B:142:VAL:HG23	1:B:182:GLN:OE1	2.06	0.55
1:B:3:GLU:O	1:B:3:GLU:HG2	2.06	0.55
1:B:304:LEU:CD2	1:B:306:ARG:HD2	2.36	0.55
1:A:85:ARG:O	1:A:89:GLU:HG2	2.06	0.54
1:A:404:LYS:HB3	1:A:404:LYS:NZ	2.22	0.54
1:B:239:ARG:NH1	1:B:285:GLY:HA3	2.22	0.54
1:A:84:ILE:HG13	1:A:88:ILE:HD13	1.89	0.54
1:B:151:ARG:HD3	1:B:154:ARG:O	2.07	0.54
1:A:88:ILE:HD12	1:A:88:ILE:N	2.22	0.54
1:A:377:LEU:N	1:A:377:LEU:CD2	2.71	0.54
1:B:147:ARG:HH21	1:B:189:ASN:HB2	1.72	0.54
1:A:84:ILE:HG23	1:A:85:ARG:H	1.72	0.54
1:A:71:GLN:HG3	1:A:121:MET:CE	2.38	0.54
1:A:68:ARG:HB2	1:A:68:ARG:HH11	1.72	0.53
1:A:9:PHE:HB3	1:A:13:SER:HB2	1.90	0.53
1:B:51:LEU:HD21	1:B:63:LYS:HB2	1.89	0.53
1:A:145:VAL:CG1	1:A:162:LEU:HD12	2.27	0.53
1:A:280:LYS:O	1:A:281:ASP:HB2	2.08	0.53
1:B:44:ILE:CD1	1:B:70:ILE:HD12	2.38	0.53
1:B:413:PHE:CE2	1:B:439:VAL:HA	2.44	0.53
1:A:302:LEU:HD21	1:A:443:LEU:HD22	1.89	0.53
1:A:311:LEU:O	1:A:351:LEU:HD23	2.09	0.53
1:A:299:PHE:CE2	1:A:391:LEU:HD23	2.44	0.53
1:B:171:LEU:HB3	1:B:172:PRO:HD3	1.90	0.53
1:B:44:ILE:HA	1:B:47:LEU:HD12	1.89	0.53
1:B:147:ARG:HE	1:B:189:ASN:HA	1.74	0.53
1:B:346:GLU:OE1	1:B:346:GLU:HA	2.09	0.53
1:A:406:VAL:O	1:A:409:VAL:HG22	2.09	0.53
1:A:17:PHE:CD2	1:A:77:ARG:HB2	2.44	0.53
1:A:315:SER:O	1:A:318:MET:HG2	2.09	0.53
1:B:438:GLN:NE2	1:B:438:GLN:H	2.08	0.52
1:B:85:ARG:O	1:B:89:GLU:HG2	2.09	0.52
1:A:316:LEU:HD22	1:A:316:LEU:N	2.21	0.52
1:B:170:LEU:HD13	1:B:212:LEU:HD11	1.90	0.52
1:B:341:LEU:HD11	1:B:388:LEU:CD1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:439:VAL:HG12	1:B:443:LEU:HD12	1.90	0.52
1:A:57:PRO:O	1:A:61:PHE:HD1	1.92	0.52
1:A:83:VAL:O	1:A:86:GLU:HB2	2.10	0.52
1:B:337:ILE:HG12	1:B:365:LEU:CD2	2.38	0.52
1:B:444:HIS:CD2	1:B:449:GLU:HG3	2.45	0.52
1:B:228:THR:OG1	1:B:444:HIS:HE1	1.92	0.52
1:A:227:TYR:CD2	1:A:239:ARG:HA	2.45	0.52
1:A:410:LEU:HD11	1:A:427:LEU:HD21	1.90	0.51
1:A:119:GLU:HB3	1:A:182:GLN:HB3	1.91	0.51
1:A:281:ASP:OD2	1:A:284:ALA:HB2	2.10	0.51
1:B:79:ARG:C	1:B:81:PRO:HD3	2.31	0.51
1:A:34:ARG:HG2	1:A:34:ARG:NH1	2.25	0.51
1:A:149:ASN:OD1	1:A:156:GLU:N	2.31	0.51
1:A:392:ILE:N	1:A:392:ILE:HD12	2.25	0.51
1:A:405:GLU:CD	1:A:405:GLU:H	2.14	0.51
1:B:291:ASN:OD1	1:B:292:LYS:HG3	2.10	0.51
1:A:260:HIS:CE1	1:B:319:LEU:HB3	2.46	0.51
1:A:224:PRO:O	1:A:286:GLY:HA2	2.11	0.50
1:B:434:GLU:CD	1:B:434:GLU:N	2.57	0.50
1:A:416:ARG:HG3	1:B:398:LYS:O	2.12	0.50
1:B:9:PHE:HB3	1:B:13:SER:HB2	1.94	0.50
1:A:24:ALA:O	1:A:28:LEU:HG	2.12	0.50
1:A:278:SER:OG	1:A:280:LYS:HG2	2.11	0.50
1:A:386:LEU:HD13	1:A:430:LEU:HD23	1.94	0.50
1:B:392:ILE:N	1:B:392:ILE:CD1	2.74	0.50
1:B:239:ARG:HH12	1:B:285:GLY:HA3	1.75	0.50
1:A:3:GLU:HA	1:A:3:GLU:OE2	2.11	0.50
1:A:266:PRO:HA	1:A:269:ARG:HE	1.77	0.50
1:A:431:VAL:HB	1:A:432:PRO:HD2	1.94	0.50
1:B:47:LEU:O	1:B:51:LEU:HG	2.12	0.50
1:A:88:ILE:HD12	1:A:88:ILE:H	1.77	0.49
1:A:239:ARG:HG3	1:A:239:ARG:NH1	2.19	0.49
1:A:251:MET:O	1:A:254:PHE:HB3	2.12	0.49
1:B:71:GLN:HG3	1:B:121:MET:HE1	1.94	0.49
1:A:351:LEU:HD23	1:A:351:LEU:N	2.27	0.49
1:B:324:PHE:O	1:B:328:VAL:HG23	2.11	0.49
1:A:216:ARG:HG2	1:A:217:VAL:N	2.27	0.49
1:B:431:VAL:HG22	1:B:432:PRO:CD	2.40	0.49
1:A:324:PHE:O	1:A:328:VAL:HG23	2.12	0.49
1:A:248:ALA:O	1:A:251:MET:HB2	2.13	0.49
1:A:266:PRO:HA	1:A:269:ARG:NE	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:334:ARG:HG3	1:B:334:ARG:HH11	1.78	0.49
1:B:266:PRO:HA	1:B:269:ARG:NE	2.28	0.49
1:A:147:ARG:HG3	1:A:147:ARG:HH11	1.77	0.49
1:A:107:SER:HB2	1:A:108:PRO:HD2	1.95	0.48
1:B:172:PRO:HA	1:B:175:ASN:ND2	2.27	0.48
1:A:74:ILE:HG21	1:A:125:LEU:HD13	1.94	0.48
1:A:137:ALA:CB	1:A:178:LEU:HD23	2.40	0.48
1:A:346:GLU:HA	1:A:346:GLU:OE1	2.13	0.48
1:B:155:ALA:HB2	1:B:194:THR:OG1	2.13	0.48
1:A:174:LEU:HD23	1:A:179:VAL:CG2	2.44	0.48
1:B:79:ARG:HG3	1:B:79:ARG:HH11	1.78	0.48
1:A:71:GLN:HG3	1:A:121:MET:HE1	1.94	0.48
1:A:30:ASP:HB3	1:A:33:VAL:HG13	1.95	0.48
1:B:72:PHE:HA	1:B:75:LEU:HB2	1.95	0.48
1:A:234:VAL:O	1:A:234:VAL:HG22	2.13	0.48
1:B:338:SER:O	1:B:354:ASP:HB3	2.13	0.48
1:B:438:GLN:O	1:B:442:LYS:HG3	2.13	0.48
1:A:27:VAL:HG13	1:A:33:VAL:CG2	2.44	0.48
1:A:268:VAL:HG23	1:A:269:ARG:N	2.29	0.48
1:A:445:SER:HA	1:A:449:GLU:CG	2.44	0.48
1:B:80:TYR:N	1:B:81:PRO:HD3	2.28	0.48
1:A:445:SER:HA	1:A:449:GLU:HB2	1.96	0.48
1:A:377:LEU:O	1:A:378:CYS:HB3	2.14	0.47
1:B:338:SER:HB3	1:B:354:ASP:HB3	1.96	0.47
1:A:147:ARG:HG3	1:A:147:ARG:NH1	2.28	0.47
1:B:410:LEU:HB2	1:B:415:ILE:HD11	1.97	0.47
1:B:265:LEU:HA	1:B:268:VAL:HG22	1.96	0.47
1:A:415:ILE:HB	1:B:407:PHE:CZ	2.49	0.47
1:B:44:ILE:HD13	1:B:70:ILE:HD12	1.96	0.47
1:A:342:ILE:HD11	1:B:325:LEU:CD1	2.45	0.47
1:A:198:ARG:HG3	1:A:198:ARG:NH1	2.28	0.47
1:A:411:GLU:N	1:A:412:PRO:HD2	2.30	0.47
1:A:80:TYR:N	1:A:81:PRO:CD	2.77	0.47
1:A:170:LEU:CD1	1:A:212:LEU:HD11	2.44	0.47
1:A:223:VAL:C	1:A:278:SER:HB2	2.35	0.47
1:B:33:VAL:O	1:B:33:VAL:HG13	2.13	0.47
1:B:138:GLN:HG2	1:B:178:LEU:O	2.15	0.47
1:A:14:VAL:HG23	1:A:41:SER:HA	1.96	0.47
1:A:88:ILE:HG23	1:A:121:MET:HE2	1.96	0.47
1:A:377:LEU:HD23	1:A:377:LEU:H	1.79	0.47
1:B:311:LEU:HB3	1:B:351:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:397:SER:HB3	1:B:424:SER:HA	1.97	0.47
1:B:182:GLN:H	1:B:182:GLN:CD	2.18	0.47
1:A:411:GLU:HG2	1:B:404:LYS:HE2	1.97	0.46
1:A:411:GLU:HG2	1:B:404:LYS:CE	2.45	0.46
1:B:147:ARG:NH1	1:B:147:ARG:HG2	2.30	0.46
1:B:52:ALA:CB	1:B:111:THR:HG23	2.45	0.46
1:B:374:LEU:O	1:B:377:LEU:HD23	2.15	0.46
1:B:388:LEU:HA	1:B:430:LEU:HD12	1.97	0.46
1:B:229:THR:CG2	1:B:230:ASP:N	2.77	0.46
1:A:233:VAL:HG12	1:A:234:VAL:HG12	1.98	0.46
1:A:291:ASN:O	1:A:292:LYS:HD2	2.15	0.46
1:B:234:VAL:HG13	1:B:234:VAL:O	2.16	0.46
1:A:138:GLN:HE22	1:A:176:GLU:HB2	1.81	0.46
1:A:260:HIS:HD2	1:A:262:ALA:N	2.11	0.46
1:B:313:LEU:HB2	1:B:349:VAL:HG13	1.97	0.46
1:A:78:LEU:HB2	1:A:81:PRO:HG3	1.97	0.46
1:A:183:GLY:O	1:A:184:PHE:HB3	2.15	0.46
1:A:226:ILE:HG13	1:A:240:ILE:HB	1.98	0.46
1:A:432:PRO:HB2	1:A:434:GLU:OE1	2.15	0.46
1:B:48:LEU:HD13	1:B:115:VAL:HA	1.97	0.45
1:B:258:VAL:CG1	1:B:276:VAL:HG11	2.45	0.45
1:B:148:THR:OG1	1:B:155:ALA:HB1	2.16	0.45
1:B:164:GLU:O	1:B:168:LEU:HD13	2.16	0.45
1:A:294:GLU:HG3	1:A:295:ASN:ND2	2.31	0.45
1:A:325:LEU:CD1	1:B:342:ILE:HD11	2.46	0.45
1:A:404:LYS:HD3	1:B:411:GLU:OE1	2.17	0.45
1:B:56:GLU:OE2	1:B:58:GLY:N	2.47	0.45
1:B:148:THR:CB	1:B:155:ALA:HB1	2.47	0.45
1:B:414:ASN:O	1:B:431:VAL:HG23	2.16	0.45
1:A:437:GLU:O	1:A:441:GLN:HG3	2.15	0.45
1:B:207:LEU:HG	1:B:266:PRO:HG2	1.99	0.45
1:B:335:HIS:CD2	1:B:370:LEU:HD13	2.52	0.45
1:B:358:SER:CB	1:B:365:LEU:HD11	2.47	0.45
1:B:438:GLN:H	1:B:438:GLN:CD	2.20	0.45
1:B:216:ARG:HG2	1:B:217:VAL:N	2.32	0.45
1:B:300:ARG:O	1:B:301:ALA:HB2	2.16	0.45
1:A:112:ASP:OD2	1:A:194:THR:HA	2.17	0.45
1:A:254:PHE:O	1:A:258:VAL:CB	2.65	0.45
1:B:86:GLU:O	1:B:90:ARG:HB2	2.17	0.45
1:B:192:ARG:HG2	1:B:192:ARG:HH11	1.81	0.45
1:A:158:ASP:OD2	1:A:161:ALA:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:310:LEU:HB2	1:A:386:LEU:HD12	1.98	0.44
1:A:364:THR:HG22	1:A:366:LEU:H	1.82	0.44
1:A:364:THR:HG22	1:A:366:LEU:N	2.32	0.44
1:B:148:THR:HG22	1:B:157:PRO:HA	1.99	0.44
1:B:17:PHE:N	1:B:74:ILE:HG12	2.32	0.44
1:B:147:ARG:HD3	5:B:2021:HOH:O	2.18	0.44
1:B:159:ILE:H	1:B:159:ILE:CD1	2.29	0.44
1:B:219:ILE:HG21	1:B:259:LEU:HD23	1.99	0.44
1:A:4:ILE:N	1:A:4:ILE:HD12	2.32	0.44
1:A:84:ILE:HG13	1:A:88:ILE:CD1	2.47	0.44
1:A:234:VAL:O	1:A:234:VAL:HG23	2.18	0.44
1:A:251:MET:HG2	1:A:392:ILE:HG12	1.98	0.44
1:A:417:MET:HB3	1:A:430:LEU:HB2	2.00	0.44
1:B:268:VAL:HG23	1:B:269:ARG:N	2.33	0.44
1:A:79:ARG:NH1	1:A:79:ARG:HB2	2.32	0.44
1:B:119:GLU:HB3	1:B:182:GLN:HB3	1.99	0.44
1:B:247:GLU:OE2	1:B:300:ARG:HB2	2.17	0.44
1:B:280:LYS:O	1:B:281:ASP:HB2	2.18	0.44
1:A:22:ARG:O	1:A:25:ASP:HB2	2.18	0.44
1:A:403:GLY:HA3	1:A:405:GLU:OE2	2.17	0.44
1:B:23:SER:O	1:B:27:VAL:HG23	2.17	0.44
1:A:143:ARG:HD3	1:A:185:ILE:HD12	1.99	0.43
1:B:337:ILE:CG2	1:B:353:LEU:HD22	2.48	0.43
1:B:204:THR:HG22	1:B:208:LEU:HD22	2.00	0.43
1:B:259:LEU:HD12	1:B:259:LEU:C	2.39	0.43
1:A:319:LEU:HD22	1:A:320:HIS:CE1	2.53	0.43
1:A:367:THR:HG23	1:A:370:LEU:H	1.83	0.43
1:B:149:ASN:OD1	1:B:149:ASN:C	2.56	0.43
1:B:337:ILE:HG21	1:B:353:LEU:HD22	1.99	0.43
1:A:171:LEU:HB3	1:A:172:PRO:HD3	1.99	0.43
1:A:275:PHE:HA	1:A:288:LEU:HD23	1.99	0.43
1:A:227:TYR:HD2	1:A:239:ARG:HA	1.82	0.43
1:B:13:SER:HB3	1:B:23:SER:OG	2.19	0.43
1:B:182:GLN:CD	1:B:182:GLN:N	2.71	0.43
1:B:405:GLU:CD	1:B:405:GLU:H	2.21	0.43
1:A:83:VAL:CG1	1:A:84:ILE:N	2.82	0.43
1:A:305:ARG:HB2	1:A:388:LEU:HB3	2.00	0.43
1:B:304:LEU:HD11	1:B:306:ARG:CG	2.42	0.43
1:A:44:ILE:CD1	1:A:70:ILE:HD12	2.49	0.43
1:A:229:THR:CG2	1:A:230:ASP:N	2.81	0.43
1:A:411:GLU:O	1:B:404:LYS:HE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:79:ARG:HB2	1:A:79:ARG:HH11	1.84	0.43
1:A:316:LEU:HD23	5:A:2038:HOH:O	2.17	0.43
1:A:335:HIS:CG	1:A:370:LEU:HD13	2.54	0.43
1:A:56:GLU:OE2	1:A:58:GLY:N	2.52	0.43
1:B:390:ALA:CB	1:B:428:CYS:HB3	2.48	0.43
1:A:148:THR:CB	1:A:155:ALA:HB1	2.48	0.42
1:A:247:GLU:OE2	1:A:394:ASN:ND2	2.51	0.42
1:A:407:PHE:CE1	1:B:415:ILE:HB	2.54	0.42
1:B:147:ARG:HE	1:B:189:ASN:CA	2.32	0.42
1:A:23:SER:O	1:A:27:VAL:HG23	2.20	0.42
1:A:44:ILE:HD13	1:A:70:ILE:HD12	2.00	0.42
1:A:173:ARG:HE	1:A:176:GLU:CD	2.23	0.42
1:A:332:LEU:HD11	1:A:351:LEU:HD11	2.01	0.42
1:A:188:GLU:OE2	1:A:192:ARG:NH2	2.44	0.42
1:B:377:LEU:N	1:B:377:LEU:CD2	2.82	0.42
1:A:322:ARG:HD3	1:B:336:ASN:HA	2.01	0.42
1:B:377:LEU:HD23	1:B:377:LEU:H	1.83	0.42
1:A:436:ALA:O	1:A:440:VAL:HG23	2.20	0.42
1:B:411:GLU:N	1:B:412:PRO:CD	2.80	0.42
1:A:311:LEU:HB3	1:A:351:LEU:CD2	2.50	0.42
1:A:229:THR:O	1:A:231:PRO:HD3	2.19	0.42
1:A:88:ILE:HG22	1:A:92:LEU:HD12	2.02	0.42
1:A:109:ALA:HB2	5:A:2015:HOH:O	2.20	0.42
1:A:188:GLU:HG2	1:A:189:ASN:H	1.83	0.42
1:B:402:VAL:CG1	1:B:406:VAL:HB	2.50	0.42
1:A:151:ARG:HH22	1:A:154:ARG:HH21	1.67	0.41
1:A:261:PRO:HG3	1:B:319:LEU:CD1	2.50	0.41
1:B:192:ARG:HG2	1:B:192:ARG:NH1	2.34	0.41
1:A:200:GLY:O	1:A:203:TYR:HB3	2.20	0.41
1:A:227:TYR:CE2	1:A:239:ARG:HB2	2.56	0.41
1:A:311:LEU:HD13	1:A:366:LEU:HD21	2.02	0.41
1:A:260:HIS:HE1	1:B:319:LEU:HB3	1.85	0.41
1:A:68:ARG:HG3	1:A:72:PHE:CD1	2.55	0.41
1:A:123:THR:O	1:A:127:VAL:HG23	2.20	0.41
1:A:182:GLN:CD	1:A:182:GLN:H	2.24	0.41
1:A:411:GLU:HG2	1:B:404:LYS:NZ	2.35	0.41
1:B:56:GLU:OE1	1:B:59:GLU:N	2.49	0.41
1:B:337:ILE:CD1	1:B:370:LEU:HD22	2.51	0.41
1:A:120:LEU:O	1:A:123:THR:OG1	2.39	0.41
1:A:188:GLU:CD	1:A:190:LYS:H	2.24	0.41
1:A:334:ARG:NH1	1:A:334:ARG:HB2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:145:VAL:HG13	1:B:166:ALA:N	2.35	0.41
1:A:223:VAL:HG21	1:A:258:VAL:HG22	2.02	0.41
1:A:229:THR:CG2	1:A:230:ASP:H	2.31	0.41
1:A:344:THR:OG1	1:B:341:LEU:HA	2.20	0.41
1:A:367:THR:O	1:A:371:LEU:HG	2.21	0.41
1:A:409:VAL:HG23	1:A:410:LEU:CD2	2.51	0.41
1:B:148:THR:HB	1:B:155:ALA:HB1	2.02	0.41
1:B:229:THR:CG2	1:B:230:ASP:H	2.34	0.41
1:B:259:LEU:HD11	1:B:264:LEU:HD11	2.01	0.41
1:B:265:LEU:HB3	1:B:266:PRO:HD3	2.02	0.41
1:B:390:ALA:HB2	1:B:428:CYS:HB3	2.03	0.41
1:A:63:LYS:O	1:A:67:ILE:HG13	2.21	0.41
1:B:98:LEU:O	1:B:101:ALA:HB3	2.21	0.41
1:A:313:LEU:HB2	1:A:349:VAL:CG1	2.50	0.40
1:A:410:LEU:HD22	1:A:429:PHE:HE2	1.84	0.40
1:B:305:ARG:HB2	1:B:388:LEU:HB3	2.03	0.40
1:A:34:ARG:HH11	1:A:34:ARG:CG	2.29	0.40
1:A:61:PHE:HA	1:A:64:LEU:HB2	2.02	0.40
1:B:3:GLU:N	1:B:3:GLU:OE1	2.54	0.40
1:B:245:PHE:CG	1:B:268:VAL:HG11	2.56	0.40
1:A:162:LEU:HD21	1:A:207:LEU:HB3	2.02	0.40
1:A:83:VAL:CG1	1:A:84:ILE:H	2.33	0.40
1:A:175:ASN:HD22	1:A:175:ASN:HA	1.66	0.40
1:B:17:PHE:CE1	1:B:21:ASN:ND2	2.89	0.40
1:B:136:GLN:C	1:B:136:GLN:CD	2.80	0.40
1:B:240:ILE:HD11	1:B:301:ALA:HB2	2.03	0.40
1:B:265:LEU:HA	1:B:268:VAL:CG2	2.52	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	445/449 (99%)	407 (92%)	36 (8%)	2 (0%)	34	66
1	B	441/449 (98%)	405 (92%)	30 (7%)	6 (1%)	11	34
All	All	886/898 (99%)	812 (92%)	66 (7%)	8 (1%)	17	46

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	257	LYS
1	B	258	VAL
1	A	294	GLU
1	B	256	ALA
1	B	284	ALA
1	B	378	CYS
1	B	281	ASP
1	A	281	ASP

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	367/369 (100%)	344 (94%)	23 (6%)	18	46
1	B	366/369 (99%)	344 (94%)	22 (6%)	19	48
All	All	733/738 (99%)	688 (94%)	45 (6%)	18	48

All (45) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	34	ARG
1	A	87	GLU
1	A	142	VAL
1	A	169	GLN
1	A	170	LEU
1	A	188	GLU
1	A	189	ASN
1	A	234	VAL

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Mol	Chain	Res	Type
1	A	259	LEU
1	A	291	ASN
1	A	300	ARG
1	A	310	LEU
1	A	316	LEU
1	A	319	LEU
1	A	345	SER
1	A	367	THR
1	A	377	LEU
1	A	404	LYS
1	A	413	PHE
1	A	416	ARG
1	A	435	ASP
1	A	443	LEU
1	A	447	LEU
1	B	3	GLU
1	B	8	LYS
1	B	35	LEU
1	B	114	LEU
1	B	142	VAL
1	B	170	LEU
1	B	171	LEU
1	B	188	GLU
1	B	192	ARG
1	B	198	ARG
1	B	310	LEU
1	B	319	LEU
1	B	365	LEU
1	B	377	LEU
1	B	410	LEU
1	B	413	PHE
1	B	416	ARG
1	B	427	LEU
1	B	430	LEU
1	B	434	GLU
1	B	435	ASP
1	B	446	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	ASN

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Mol	Chain	Res	Type
1	A	94	ASN
1	A	138	GLN
1	A	175	ASN
1	A	189	ASN
1	A	260	HIS
1	A	291	ASN
1	A	295	ASN
1	A	394	ASN
1	A	438	GLN
1	B	94	ASN
1	B	138	GLN
1	B	175	ASN
1	B	260	HIS
1	B	317	ASN
1	B	438	GLN
1	B	444	HIS
1	B	446	ASN

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 monosaccharides 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
3	LYS	B	1450	-	8,9,9	0.41	0	9,10,10	1.09	1 (11%)
4	PO4	A	1000	-	4,4,4	1.60	0	6,6,6	0.43	0
3	LYS	A	1451	-	8,9,9	0.36	0	9,10,10	1.05	1 (11%)
2	ASP	A	502	-	6,8,8	1.01	0	8,10,10	1.05	0

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
3	LYS	B	1450	-	-	0/9/9/9	-
3	LYS	A	1451	-	-	1/9/9/9	-
2	ASP	A	502	-	-	0/8/8/8	-

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B	1450	LYS	OXT-C-O	-2.30	118.88	124.09
3	A	1451	LYS	OXT-C-O	-2.04	119.45	124.09

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1451	LYS	N-CA-CB-CG

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	1450	LYS	1	0
2	A	502	ASP	1	0

5.7 Other polymers ⓘ

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 (i)

6.1 Protein, DNA and RNA chains (i)

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	447/449 (99%)	-0.22	10 (2%)	62	52	15, 36, 66, 104	0
1	B	445/449 (99%)	-0.14	6 (1%)	77	72	18, 36, 65, 96	0
All	All	892/898 (99%)	-0.18	16 (1%)	68	61	15, 36, 66, 104	0

All (16) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	360	SER	4.1
1	A	361	THR	4.0
1	A	358	SER	3.5
1	A	255	GLY	3.1
1	B	344	THR	2.8
1	B	294	GLU	2.7
1	A	359	THR	2.6
1	B	283	ARG	2.5
1	A	357	GLY	2.5
1	B	343	THR	2.4
1	A	419	CYS	2.2
1	A	365	LEU	2.2
1	B	61	PHE	2.1
1	B	356	THR	2.1
1	A	362	GLY	2.1
1	A	356	THR	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(Å^2)	Q<0.9
2	ASP	A	502	9/9	0.83	0.23	58,64,73,87	0
4	PO4	A	1000	5/5	0.89	0.21	62,85,87,96	0
3	LYS	B	1450	10/10	0.92	0.20	14,33,49,56	0
3	LYS	A	1451	10/10	0.95	0.13	2,20,28,34	0

6.5   Other polymers (i)

There are no such residues in this entry.