

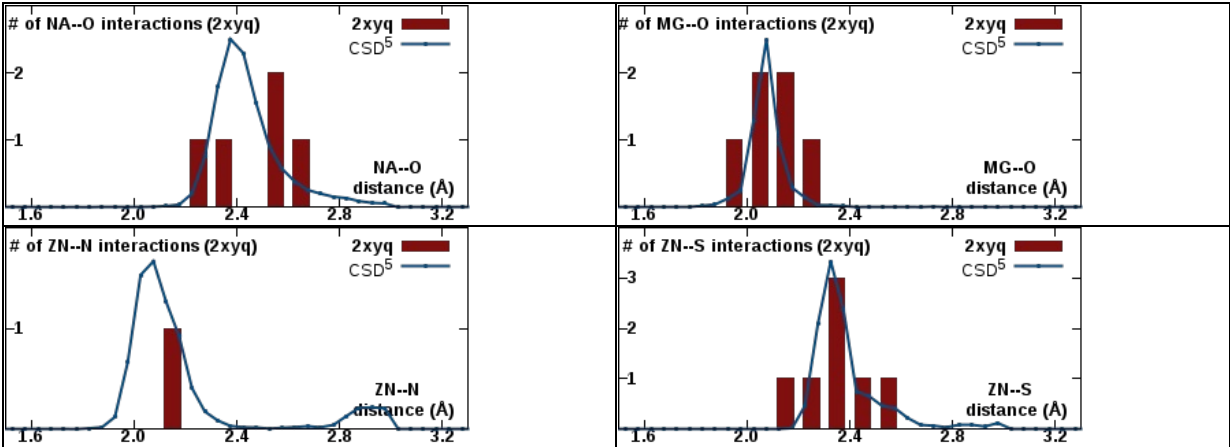
CheckMyMetal(CMM) report for PDB code: 2xyq

PDB title: Crystal structure of the nsp16 nsp10 sars coronavirus complex (2.0Å)

ID	Res.	Metal	Occupancy	B factor (env.) <sup>1</sup>	Ligands	Valence <sup>2</sup>	nVECSUM <sup>3</sup>	Geometry <sup>1,4</sup>	gRMSD(°) <sup>1</sup>	Vacancy <sup>1</sup>	Bidentate	Alt. metal
A:1291	CL	Cl	1	51.5 (43)		N/A	N/A	Free	N/A	N/A	N/A	
A:1292	CL	Cl	1	53.9 (44.5)		N/A	N/A	Free	N/A	N/A	N/A	
A:1294	NA	Na	1	62.5 (50)	O <sub>4</sub>	0.7	0.52	Tetrahedral	36°	0	0	
A:1295	NA	Na	1	39.4 (28.1)	O <sub>1</sub>	0.11	1	Poorly Coordinated	N/A	N/A	0	
A:1296	MG	Mg	1	50.4 (46.6)	O <sub>6</sub>	1.9	0.058	Octahedral	11.8°	0	0	
B:1132	ZN	Zn	1	37.5 (38.8)	N <sub>1</sub> S <sub>3</sub>	1.9	0.046	Tetrahedral	4.6°	0	0	
B:1133	ZN	Zn	1	60.2 (60.9)	S <sub>4</sub>	2	0.17	Tetrahedral	5.1°	0	0	
Legend:			Not applicable	Outlier	Borderline	Acceptable						

Column	Description
Occupancy	Occupancy of ion under consideration
B factor (env.) <sup>1</sup>	Metal ion B factor, with valence-weighted environmental average B factor in parenthesis
Ligands	Elemental composition of the coordination sphere
Valence <sup>2</sup>	Summation of bond valence values for an ion binding site. <i>Valence</i> accounts for metal-ligand distances
nVECSUM <sup>3</sup>	Summation of ligand vectors, weighted by bond valence values and normalized by overall valence. Increase when the coordination sphere is not symmetrical due to incompleteness.
Geometry <sup>1,4</sup>	Arrangement of ligands around the ion, as defined by the <i>NEIGHBORHOOD</i> algorithm
gRMSD(°) <sup>1</sup>	R.M.S. Deviation of observed geometry angles (L-M-L angles) compared to ideal geometry, in degrees
Vacancy <sup>1</sup>	Percentage of unoccupied sites in the coordination sphere for the given geometry
Bidentate	Number of residues that form a bidentate interaction instead of being considered as multiple ligands
Alt. metal	A list of alternative metal(s) is proposed in descending order of confidency, assuming metal environment is accurately determined. This feature is still experimental. It requires user discrimination and cannot be blindly accepted

Metal-ligand distance distributions for pdb2xyq.ent in comparison with CSD



(1) Zheng H, Chordia MD, Cooper DR, Chruszcz M, Müller P, Sheldrick GM, Minor W (2014) *Nature Protocols*, 9(1), 156-70.  
(2) Brown ID (2009) *Chem. Rev.*, 109, 6858-6919.  
(3) Müller P, Köpke S, Sheldrick GM (2003) *Acta Crystallogr. D Biol. Crystallogr.*, 59, 32-37.  
(4) Kuppuraj G, Dudev M, Lim C (2009) *J. Phys. Chem. B*, 113, 2952-2960.  
(5) CSD: Cambridge Structural Database

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**Citing CheckMyMetal (CMM):**  
**Validation of metal-binding sites in macromolecular structures with the CheckMyMetal web server.** Zheng,H., Chordia,M.D., Cooper,D.R., Chruszcz,M., Müller,P., Sheldrick,G.M., Minor,W. (2014) *Nature Protocols*, 9(1), 156-70.