**Atomic resolution (0.97 Å) structure of the triple mutant (K53,56,121M) of bovine pancreatic phospholipase A₂**


**Abstract:** The enzyme phospholipase A₂ catalyzes the hydrolysis of the sn-2 acyl chain of phospholipids, forming fatty acids and lysophospholipids. The crystal structure of a triple mutant (K53,56,121M) of bovine pancreatic phospholipase A₂ in which the lysine residues at positions 53, 56 and 121 are replaced recombinantly by methionines has been determined at atomic resolution (0.97 Å). The crystal is monoclinic (space group P2₁), with unit-cell parameters a = 36.934 Å, b = 23.863 Å, c = 65.931 Å, β = 101.47°. The structure was solved by molecular replacement and has been refined to a final R factor of 10.6% (R_free = 13.4%) using 63,926 unique reflections. The final protein model consists of 123 amino-acid residues, two calcium ions, one chloride ion, 243 water molecules and six 2-methyl-2,4-pentanediol molecules. The surface-loop residues 60-70 are ordered and have clear electron density.

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**Keywords:** phospholipase A₂.