Cage-like Hexamers of Cold-active β -galactosidase from Arthrobacter sp. C2-2

Jan Dohnalek^a, Tereza Skalova^a, Jarmila Duskova^a, Hana Petrokova^a, Eva Vondrackova, Petra Lipovova^b, Vojtech Spiwok^b, Blanka Kralova^b, Jindrich Hasek^a, ^aInstitute of Macromolecular Chemistry of the Czech Academy of Science, Prague, Czech Republic. ^bInstitute of Chemical Technology, Prague, Czech Republic. E-mail: dohnalek@imc.cas.cz

β-galactosidase catalyzes hydrolysis of galactosyl moiety from non-reducing termini of oligosaccharides or from glycosides. Crystals of β-galactosidase from psychrotrophic bacterium *Arthrobacter* sp. C2-2 were grown by vapor diffusion technique and X-ray diffraction data were collected up to 1.9 Å [1]. Molecular replacement solution in $P2_1$ space group revealed six molecules arranged in cage-like hexameric structure with cca 60,000 non-hydrogen atoms per asymmetric unit. The compact hexamers are characterized by three types of channels, six active sites open towards the central cavity, high number of buried water molecules within the protein and Na⁺ and Mg²⁺ ions bound in vicinity of the active site. Comparison to *E.coli* βgalactosidase shows both similarities and significant differences regarding the active site and oligomerization mechanism.

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