

Membrane-bound forms of serine proteases in *Bacillus intermedius*

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Abstract

Proteolytic proteins solubilized from the membrane of *Bacillus intermedius* were studied by electrophoresis. The content of membrane-bound proteinases was lower in cells grown in the presence of glucose. Proteinase enzymograms revealed four molecular forms of subtilisin and four molecular forms of glutamyl endopeptidase. The electrophoretic mobility of one of the molecular forms was similar to those of the mature extracellular proteinases. Chromatography of membrane proteins on a MonoS column yielded four protein fractions that caused hydrolysis of Z-Glu-pNA and four fractions that caused hydrolysis of Z-Ala-Ala-Leu-pNA, which is in agreement with the results of electrophoresis. The molecular forms of proteinases identified in the membrane may reflect various stages of biogenesis of the corresponding extracellular enzymes.

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Keywords

Bacillus intermedius, Glutamyl endopeptidase, Membrane, Molecular forms, Subtilisin-like thiol-dependent proteinase