

Purification of recombinant extracellular proteases from *Bacillus pumilus* for β -amyloid peptide cleavage

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Abstract

© 2016 Pleiades Publishing, Ltd. Using the expression vector pGP382 containing a constitutive promoter (P degQ36) and an affinity tag (Strep-tag), we have obtained highly purified recombinant *Bacillus pumilus* 3-19 proteinases with different substrate specificities: glutamylendopeptidase (GseBp), subtilisin-like protease (AprBp), and metalloendopeptidase (MprBp). The products of the hydrolysis of the β -amyloid peptide by the bacterial proteases from *B. pumilus* have been studied. The findings on the potential of the practical application of these bacterial enzymes as the agents preventing the development of the Alzheimer's disease are presented.

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Keywords

affinity chromatography, *Bacillus pumilus* 3-19, biological activity, expression vector, glutamylendopeptidase, metalloendopeptidase, subtilisin-like protease