

Russian Journal of Bioorganic Chemistry 2012 vol.38 N4, pages 383-391

The novel adams-like microbial metalloendopeptidase

Balaban N., Rudakova N., Sabirova A., Valeeva L., Sharipova M.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Heterologous gene expression of the extracellular minor metalloendopeptidase of *Bacillus pumilus* 3-19 (AN EU678894) in the protease-deficient *B. pumilus* 3-19 strain has been studied. The enzyme fraction in the total pool of *B. pumilus* 3-19 proteases is less than 8%. The enzyme was isolated from the culture liquid of the recombinant strain and purified to a homogeneous state; its primary structure was determined and its physicochemical properties were investigated. The secreted metalloendopeptidase of *B. pumilus* 3-19 is the first prokaryotic homologue of the eukaryotic adamalysin/reprolysin protein family. © Pleiades Publishing, Ltd., 2012.

<http://dx.doi.org/10.1134/S1068162012040036>

Keywords

Adamalysins/reprolysin, *B. pumilus*, Metalloendopeptidase, Primary structure, Properties, Recombinant strain