

The expression of *Bacillus intermedius* glutamyl endopeptidase gene in *Bacillus subtilis* recombinant strains

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Abstract

The gene encoding for *B. intermedius* glutamyl endopeptidase (*gseBi*) has previously been cloned and its nucleotide sequence analyzed. In this study, the expression of this gene was explored in protease-deficient strain *B. subtilis* AJ73 during stationary phase of bacterial growth. We found that catabolite repression usually involved in control of endopeptidase expression during vegetative growth was not efficient at the late stationary phase. Testing of *B. intermedius* glutamyl endopeptidase gene expression with *B. subtilis* *spo0*-mutants revealed slight effect of these mutations on endopeptidase expression. Activity of glutamyl endopeptidase was partly left in *B. subtilis* *ger*-mutants. Probably, *gseBi* expression was not connected with sporulation. This enzyme might be involved in outgrowth of the spore, when germinating endospore converts into the vegetative cell. These data suggest complex regulation of *B. intermedius* glutamyl endopeptidase gene expression with contribution of several regulatory systems and demonstrate changes in control of enzyme biosynthesis at different stages of growth. © 2007 Springer Science+Business Media, Inc.

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Keywords

Bacillus intermedius, Gene expression, Glutamyl endopeptidase