

# The effect of Spo0A and AbrB proteins on expression of the genes of guanyl-specific ribonucleases from *Bacillus intermedius* and *Bacillus pumilus* in *Bacillus subtilis* recombinant strains

Ul'yanova V., Vershinina V., Kharitonova M., Sharipova M.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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## Abstract

Guanyl-specific ribonucleases from *Bacillus intermedius* and *Bacillus pumilus* are actively secreted under phosphate starvation by recombinant strains of *Bacillus subtilis* with native regulatory systems and by strains defective in some proteins of the Spo0A phosphorylation pathway. The level of expression of ribonuclease genes has been shown to increase approximately sixfold in recombinant strains with mutation in the spo0A gene and threefold in the spo0A/abrB mutants, as compared with native strains. These results demonstrate that the Spo0A protein regulates the production of ribonucleases and thus acts as a repressor, while the AbrB protein is an activator of expression of the genes encoding ribonucleases from *Bacillus intermedius* and *Bacillus pumilus* in *Bacillus subtilis* cells. © 2007 Pleiades Publishing, Ltd.

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## Keywords

Bacilli, Binase, Bpu RNase, Regulation of biosynthesis