Molecular Genetics, Microbiology and Virology 2008 vol.23 N3, pages 126-131

Role of a two-component ResD-ResE system in regulating the expression of guanyl-specific ribonuclease genes in Bacilli

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Abstract

The role of the two-component ResD-ResE signal transduction system in regulating the expression of guanyl-specific ribonuclease genes in bacilli has been studied. Proteins with homologies to the ResD and ResE regulatory proteins of Bacillus subtilis have been found in all sequenced genomes of Bacillus. It has been shown using the B. subtilis strains defective in genes of these proteins that the ResD-ResE signal transduction system positively regulates the expression of ribonuclease genes of B. intermedius, B. pumilus, and B. thuringiensis in cells of B. subtilis. The data obtained in this work speak for the fact that regulatory system similar to the two-component ResD-ResE signal transduction system of B. subtilis also functions in other representatives of the Bacillus genus. © 2008 Allerton Press, Inc.

http://dx.doi.org/10.3103/S089141680803004X