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Bacillus pumilus strains with inactivated genes of extracellular serine proteinases

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Abstract

Two *Bacillus pumilus* strains with inactivated genes of extracellular serine proteinases (subtilisin-like proteinase and glutamyl endopeptidase) were obtained. Inactivation of the *gseBp* and *aprBp* genes resulted in an increase in cell size, changed colony shape, and more rapid cell lysis that started during the growth retardation phase. Protease-deficient stains partially changed the ability to decompose carbohydrates (sugars), reduced resistance to variations in temperature of cultivation, and did not respond to the fluctuations of phosphate concentration in the medium. Proteinases gene disruption resulted in alteration of hydrolases secretion level by these bacteria. © 2013 Pleiades Publishing, Ltd.

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Keywords

Bacillus pumilus, gene inactivation, homologous recombination, serine proteases