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Molecular cloning of ribonucleases from bacilli

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Abstract

Genes for extracellular ribonucleases of B.pumilus (RNase Bp) and B.intermedius (binase) were cloned. The similarity between structural genes of these enzymes and small differences in signal peptides and promoters were discovered. Plasmids with binase and RNase Bp structural genes on their own promoters and signal peptides (pML5 and pML61) and on tac-promoter and phoA signal peptide (pML163 and pML167) were constructed. Suppression of binase and RNase Bp expression by inorganic phosphate (Pi) was shown in E.coli recombinants with pML5 and pML61 as well as in bacilli. Stimulation of RNases synthesis by actinomycin D was determined only in bacillar strains.