Endonuclease from Proteus mirabilis

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Abstract

Two isoforms of nuclease displaying DNase and RNase activities were found in the culture liquid and periplasm of Proteus mirabilis. The enzyme was isolated from the periplasm and then purified to a functionally homogeneous state. The nuclease was equally potent in cleaving denatured and native DNAs by the endonuclease mechanism and was designated Pm endonuclease. The endonuclease was shown to be a temperature-dependent enzyme with a pH optimum of 10.4-10.6, requiring the presence of bivalent metal ions and inhibited by citrate and ethylenediaminetetraacetate. © 2001 MAIK "Nauka/Interperiodica".