Creative Enzymes®

Native Bovine Deoxyribonuclease I

Cat. No. PHAM-266

Lot. No. (See product label)

Introduction

Description DNase I is an endonuclease that acts on phosphodiester bonds adjacent to pyrimidines to produce polynucleotides with terminal 5′-phosphates. In the presence of Mg2+, DNAse I cleaves each strand of DNA independently and the cleavage sites are random. Both DNA strands are cleaved at approximately the same site in the presence of Mn2+.2 The pH optimum is found to be between 7 and 8. Divalent cations such as Mn2+, Ca2+, Co2+, and Zn2+ are activators of the enzyme.3 A concentration of 5 mM Ca2+ stabilizes the enzyme against proteolytic digestion. DNAse I from bovine pancreas consists of four chromatographically distinguishable components, A, B, C, and D, with molar ratios being 4:1:1 respectively. Only minor amounts of D are found.4 2-Mercaptoethanol, chelators, sodium dodecyl sulfate (SDS)5 and actin6 are known to inhibit the enzyme activity.

Applications Used for the removal of DNA from protein samples.

Synonyms EC 3.1.21.1; DNase I; Deoxyribonuclease I; Deoxyribonucleate 5'-oligonucleotido-hydrolase

Product Information

Species Bovine

Source Bovine pancreas

EC Number EC 3.1.21.1

CAS No. 9003-98-9

Molecular Weight mol wt ~31 kDa

Unit Definition One Kunitz unit will produce a ΔA260 of 0.001 per min per mL at pH 5.0 at 25 °C, using DNA, Type I or III as substrate. [Mg2+] = 4.2 mM

Usage and Packaging

Package vial of >0.5 mg total protein

Storage and Shipping Information

Storage −20°C