Creative Enzymes®

Native Bovine Phosphodiesterase II

Cat. No. NATE-0518

Lot. No. (See product label)

Introduction

Description Phosphodiesterase (PDE) is any enzyme that is used to breaks phosphodiester bonds. The enzyme acts on poly (A), poly (U), and poly (I). Native DNA and poly (C) are quite resistant to the action of this enzyme. Hydrolyzes RNA, RNA-Core, 3'-alkyl-and 3'-aryl-nucleoside phosphates, and polydeoxyribonucleotides with 3'-phosphate end groups to 3'-mononucleotides. Polynucleotides having 5'-phosphomonoester end groups are not attacked.

Applications Phosphodiesterase (PDE) is any enzyme that is used to breaks phosphodiester bonds. It is a membrane-bound glycoprotein that is used to catalyze the hydrolysis of various nucleotide polyphosphates. Phosphodiesterase II has been used in the enzymatic digestions of purified proteins such as the P8-dGMP complex. Bovine spleen phosphodiesterase has been used to digest N-cadherin. The product has been used in the characterization of polynucleotide chain length, base composition, and identity of terminal nucleotide. The enzyme has also been used in excision of pyridyloxobutyl (POB) base adducts from DNA. Furthermore, it has been used along with micr oc occal endonuclease to hydrolyze purified DNA to 3-nucleoside monophosphates.

Synonyms 3'-exonuclease; spleen phosphodiesterase; 3'-nucleotide phosphodiesterase; phosphodiesterase II; spleen exonuclease; EC 3.1.16.1; 9068-54-6; PDE2

Product Information

Species Bovine

Source Bovine spleen

Form lyophilized powder

EC Number EC 3.1.16.1

CAS No. 9068-54-6

Activity > 5.0 units/mg protein

Pathway Morphine addiction, organism-specific biosystem; Morphine addiction, conserved biosystem; Purine metabolism, organism-specific biosystem; Purine metabolism, conserved biosystem

Unit Definition One unit will produce acid soluble nucleotides equivalent to a ΔA260 of 16 in 30 min at pH 6.5 at 37°C, in a 2.0 mL reaction mixture. Substrate: RNA-Core. Actual A260 is measured on the supernatant after precipitation of the unhydrolyzed RNA with uranyl acetate-perchloric acid reagent.

Storage and Shipping Information

Storage −20°C