Creative Enzymes®

Antarctic Phosphatase from E. coli, Recombinant

Cat. No. NATE-1399

Lot. No. (See product label)

Introduction

Description	Antarctic Phosphatase catalyzes the removal of 5´ phosphate from DNA and RNA. Since phosphatase-treated fragments lack the 5´ phosphoryl termini required by ligases, they cannot self-ligate. This property can be used to decrease the vector background in cloning strategies.
Applications	Removing 5´ phosphates from DNA, RNA, rNTPs and dNTPs Preparation of templates for 5´ end labeling Prevention of recircularization of cloning vectors Removal of dNTPs and pyrophosphate from PCR reactions Dephosphorylation of proteins
Synonyms	Antarctic Phosphatase

Product Information

Species	E. coli
Source	E. coli
Form	10 mM Tris-HCl (pH 7.4), 1 mM MgCl2, 0.01 mM ZnCl2, 1 mM DTT and 50% glycerol.
Molecular Weight	Apparent: 35 kDa Theoretical: 69 kDa
Purity	>95% estimated by SDS-PAGE
Concentration	5,000 units/ml
Unit Definition	One unit is defined as the amount of enzyme that will dephosphorylate 1 µg of pUC19 vector DNA cut with HindIII (5´ protruding ends), HincII (blunts ends) or PstI (5´ recessed ends) in 30 minutes at 37°C. Dephosphorylation is defined as > 95% inhibition of recirculation in a self-ligation reaction and is measured by transformation into E. coli.

Storage and Shipping Information

Storage	at -20°C