Creative Enzymes®

Native Human Alkaline Phosphatase

Cat. No. NATE-0057

Lot. No. (See product label)

Introduction

Description	Alkaline phosphatase (ALP, ALKP, ALPase, Alk Phos) (EC 3.1.3.1) is a hydrolase enzyme responsible for removing phosphate groups from many types of molecules, including nucleotides, proteins, and alkaloids. The process of removing the phosphate group is called dephosphorylation. As the name suggests, alkaline phosphatases are most effective in an alkaline environment. It is sometimes used synonymously as basic phosphatase.
Applications	Alkaline phosphatase is used for conjugation to antibodies and other proteins for ELISA, Western blotting, and hist ochemical detection. It is routinely used to dephosphorylate proteins and nucleic acids. It may be used for protein labeling when high sensitivity is required. Alkaline phosphatase may be also be used to dephosphorylate the 5′-termini of DNA or RNA to prevent self-ligation. DNA or RNA can also be tagged with radiolabeled phosphate (via T4 polynucleotide kinase) after dephosphorylation with alkaline phosphatase.
Synonyms	Alkaline phosphatase; ALP; ALKP; ALPase; Alk Phos; EC 3.1.3.1; Alkaline phosphomonoesterase; Glycerophosphatase; Phosphomonoesterase

Product Information

Species	Human
Source	Human placenta
EC Number	EC 3.1.3.1
CAS No.	9001-78-9
Activity	> 10 units/mg solid (in glycine buffer)
Pathway	Folate biosynthesis, organism-specific biosystem; Folate biosynthesis, conserved biosystem; Metabolic pathways, organism-specific biosystem
Function	alkaline phosphatase activity; alkaline phosphatase activity; hydrolase activity; metal ion binding
Unit Definition	One unit will hydrolyze 1 μmole of 4-nitrophenyl phosphate per minute at pH 10.4 at 37°C.

Storage and Shipping Information

Storage	−20°C