

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 histochemical 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 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 μ mole of 4-nitrophenyl phosphate per minute at pH 10.4 at 37°C.

Storage and Shipping Information

Storage

-20°C