Active Native Calf Alkaline Phosphatase

Cat. No. ALPL-66C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Species	Calf
Source	Calf Intestine
Description	Alkaline Phosphatase (ALP) is a hydrolase enzyme responsible for removing phosphate groups in the 5- and 3- positions from many types of molecules, including nucleotides, proteins, and alkaloids. In humans, alkaline phosphatase is present in all tissues throughout the entire body, but is particularly concentrated in liver, bile duct, kidney, bone, and the placenta. The optimal pH for the enzyme activity is pH 10 in standard conditions. There are at least four distinct but related alkaline phosphatases: intestinal, placental, placental-like, and liver/bone/kidney (tissue non-specific). The first three are located together on chromosome 2 while the tissue non-specific form is located on chromosome 1. The product of this gene is a membrane bound glycosylated enzyme, also referred to as the heat stable form that is expressed primarily in the placenta although it is closely related to the intestinal form of the enzyme as well as to the placental-like form. The coding sequence for this form of alkaline phosphatase is unique in that the 3 untranslated region contains multiple copies of an Alu family repeat. In addition, this gene is polymorphic and three common alleles (type 1, type 2 and type 3) for this form of alkaline phosphatase have been well characterized.
Form	Freeze Dried

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Bio-activity	3,000-6,000 U/mg protein
Purity	Purity by SDS-PAGE: ≥98%
Usage	For Research Use Only! Not For Use in Humans.
Notes	Centrifuge the vial prior to opening
Storage	-20°C
Storage Buffer	Lyophilized without any additives.
Reconstitution	Reconstitute in distilled water or dilute buffer.
Shipping	Gel pack

GENE INFORMATION

Gene Name	ALPL alkaline phosphatase, liver/bone/kidney [Bos taurus]
Official Symbol	ALPL
Synonyms	TNS-AP; alkaline phosphatase, tissue-nonspecific isozyme; TNSALPAP-TNAPliver/bone/kidney isozyme; alkaline phosphatase liver/bone/kidney isozyme; alkaline phosphatase tissue non-specific isoform
Gene ID	280994
mRNA Refseq	NM_176858
Protein Refseq	NP_789828

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UniProt ID	P09487
Chromosome Location	chromosome: 2
Pathway	Endochondral Ossification, organism-specific biosystem; Folate biosynthesis, organism-specific biosystem; Metabolic pathways, organism-specific biosystem
Function	alkaline phosphatase activity; metal ion binding; pyrophosphatase activity

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