

## 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

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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

## GENE INFORMATION

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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA