

Human Alkaline Phosphatase / ALPI Protein (Fc Tag)

Catalog Number: 13225-H02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

IAP

Protein Construction:

A DNA sequence encoding the mature form of human ALPI (P09923) (Met 1-Asp 503), without the pro peptide, was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 83 % as determined by SDS-PAGE

Bio-Activity

**Measured by its ability to cleave a fluorogenic substrate, 4-Methylumbelliferyl phosphate (4-MUP).
The specific activity is > 10,000 pmoles/min/μg.**

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 20

Molecular Mass:

The secreted recombinant human ALPI/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 725 amino acids and has a predicted molecular mass of 79.5 kDa. The apparent molecular mass of rhALPI /Fc monomer is approximately 90-95 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

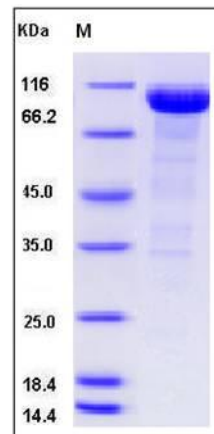
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Alkaline phosphatase, intestinal also known as ALPI is digestive brush-border enzyme which is upregulated during small intestinal epithelial cell differentiation. ALPI is also referred to as IAP and is released into the lumen after a high-fat diet. ALPI/IAP is a hydrolase enzyme responsible for removing phosphate groups from many types of molecules, including nucleotides, proteins, and alkaloids. Lysophosphatidylcholine (LysoPC) releases IAP into the apical medium more than other intestinal brush-border enzymes, sucrose, aminopeptidase N, and lactase, without comparable lactate dehydrogenase release or cell injury. There are at least four distinct but related alkaline phosphatases: intestinal, placental, placental-like, and liver/bone/kidney (tissue non-specific). Intestinal ALP shows 86.5% amino acid identity to placental ALP and 56.6% amino acid identity to liver/bone/kidney ALP.

References

1. Nakano T. et al., 2009, Am J Physiol Gastrointest Liver Physiol. 297 (1): 207-14.
2. Henthorn PS. et al., 1987, Proc Natl Acad Sci. 84 (5): 1234-8.
3. Oetting WS. et al., 2003, Pigment Cell Res. 16 (3): 307-11.

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