Recombinant human Alkaline Phosphatase/ALPL protein

Catalog Number: ATGP4125

PRODUCT INFORMATION

Expression system
HEK293

Domain
18-501aa

UniProt No.
P05186

NCBI Accession No.
NP_000469.3

Alternative Names
Aalkaline phosphatase, tissue-nonspecific isozyme isoform 1, Alkaline phosphatase liver/bone/kidney isozyme, Phosphoamidase, Phosphocreatine phosphatase, ALPL, AP-TNAP, APTNAP, HOPS, HPPA, HPPC, HPPI, HPPO, TNALP, TNAP, TNS-ALP, TNSALP

PRODUCT SPECIFICATION

Molecular Weight
54.3kDa (493aa)

Concentration
1mg/ml (determined by Absorbance at 280nm)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 95% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 40,000 pmol/min/ug and is defined as the amount of enzyme that hydrolyze 1pmole of 4-Methylumbelliferyl phosphate to phosphate and 4-Methylumbelliferone per minute at pH 8.8 at 37C.

Tag
His-Tag

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

Recombinant human Alkaline Phosphatase/ALPL protein

Catalog Number: ATGP4125

BACKGROUND

Description

ALPL, also known as alkaline phosphatase, tissue-nonspecific isozyme, is one of alkaline phosphatases. Alkaline phosphatase is metabolizes various phosphate compounds and plays a key role in skeletal mineralization and adaptive thermogenesis. There are at least four distinct but related alkaline phosphatases: intestinal, placental, placental-like, and liver/bone/kidney (tissue-nonspecific). Expression of this protein is nonspecific to a single tissue and is especially abundant in bone, liver, and kidney. It plays an essential role in skeletal and dental mineralization via its ability to hydrolyze extracellular diphosphate, a potent mineralization inhibitor, to phosphate. It thereby promotes hydroxyapatite crystal formation and increases inorganic phosphate concentration. Recombinant human Alkaline Phosphatase/ALPL, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

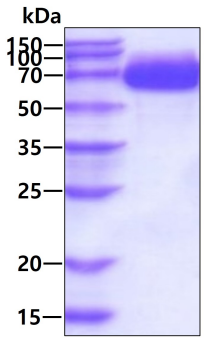
<DGS>LVPEKEK DPKYWRDQAQ ETLKYALELQ KLNTNVAKNV IMFLGDGMGV STVTAARILK GQLHHNPGEE TRLEMDKFPF VALSKTYNTN AQVPDSAGTA TAYLCGVKAN EGTVGVSAAT ERSRCNTTQG NEVTSILRWA KDAGKSVGIV TTTRVNHATP SAAYAHSADR DWYSDNEMPP EALSQGCKDI AYQLMHNIRD IDVIMGGGRK YMYPKNKTDV EYESDEKARG TRLDGLDLVD TWKSFKPRYK HSHFIWNRTE LLTLDPHNVD YLLGLFEPGD MQYELNRNNV TDPSLSEMVV VAIQILRKNP KGFFLLVEGG RIDHGHHEGK AKQALHEAVE MDRAIGQAGS LTSSEDTLTV VTADHSHVFT FGGYTPRGNS IFGLAPMLSD TDKKPFTAIL YGNGPGYKVV GGERENVSMV DYAHNNYQAQ SAVPLRHETH GGEDVAVFSK GPMAHLLHGV HEQNYVPHVM AYAACIGANL GHCAPAS<HHH HHH>

General References

Millan, J.L. and W.H. Fishman (1995) Crit. Rev. Clin. Lab. Sci. 32:1-39.
Sara Sultana., et al, (2013) Mol Genet Metab. 109:282-288.
Sonia Di Mauro., et al, (2002) J Bone Miner Res. 17:1383-1391.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain