

Alkaline Phosphatase, Tissue-nonspecific (ALPL) Active Protein | ALPL active protein

Active Alkaline Phosphatase, Tissue-nonspecific (ALPL)

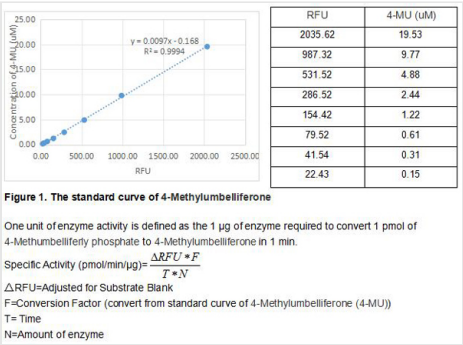
CATALOG # AAA161830	HOST 293F cell	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Alkaline Phosphatase; Tissue-nonspecific (ALPL); Active Alkaline Phosphatase; Tissue-nonspecific; ALPL active protein (eukaryotic; 293F cell); Mouse; BALP; BSAP; HOPS; AP-TNAP; TNSALP; Bone Alkaline Phosphatase; Tissue-Nonspecific Isozyme; Liver/Bone/Kidney4; ALPL active protein

PRODUCT SPECIFICATIONS

Host	293F cell
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Phe18~Gly5 03
Applicable Applications for ALPL active protein	Activity Assay, Cell Culture
Species	Mouse
Expression System	Eukaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.9
Research Area	Enzyme & Kinase, Metabolic pathway, Hepatology, Bone metabolism
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

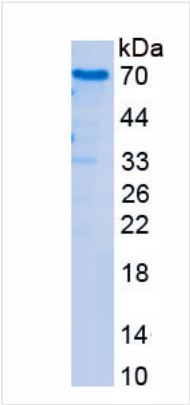


Bioactivity

Four distinct genes encode alkaline phosphatases (APs) in humans. The ALPL gene encodes the liver/bone/kidney isozyme, also known as the tissue-nonspecific AP (TNAP). In comparison, ALPI, ALPP and ALPPL2 encode intestinal, placental and placental-like or germ cell APs, respectively. The serum levels of human APs are useful tumor markers. There are many mutations in the ALPL gene, leading to different forms of hypophosphatasia, characterized by poorly mineralized cartilage and bones. The native ALPL is a glycosylated homodimer attached to the membrane through a GPI-anchor. The activity assay of recombinant mouse ALPL was measured by its ability to cleave a peptide substrate, 4-Methylumbelliferly phosphate. The reaction was performed in 50 mM Tris, 1 mM MgCl2, pH 9.0 (assay buffer), initiated by addition 50 ul of 0.3 ug/ml ALPL (diluted by assay buffer) to 50 uL of 50 uM substrate. Read at excitation and emission wavelengths of 365 nm and 445 nm (top read), respectively, in kinetic mode for 5 minutes. The specific activity of recombinant mouse ALPL is >11000 pmol/min/ug.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for ALPL active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	563317855
NCBI GeneID	11647
NCBI Accession #	NP_001274101.1
NCBI GenBank Nucleotide #	NM_001287172.1
UniProt Accession #	P09242; Q6P1B0
Molecular Weight	57,514 Da
NCBI Official Full Name	alkaline phosphatase, tissue-nonspecific isozyme preproprotein
NCBI Official Synonym Full Names	alkaline phosphatase, liver/bone/kidney
NCBI Official Symbol	Alpl
NCBI Official Synonym Symbols	ALP; Akp2; TNAP; Akp-2; APTNAP; TNSALP
NCBI Protein Information	alkaline phosphatase, tissue-nonspecific isozyme
UniProt Protein Name	Alkaline phosphatase, tissue-nonspecific isozyme
UniProt Gene Name	Alpl
UniProt Synonym Gene Names	Akp-2; Akp2; AP-TNAP; TNSALP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

