Alkaline Phosphatase/ALPL Protein, Human (HEK293, His)

Cat. No.:	HY-P7880
Synonyms:	rHuAlkaline phosphatase, tissue-nonspecific isozyme/ALPL, His; Alkaline Phosphatase; Tissue-Nonspecific Isozyme; AP-TNAP; TNSALP; Alkaline Phosphatase Liver/Bone/Kidney Isozyme; ALPL
Species:	Human
Source:	HEK293
Accession:	P05186 (L18-S502)
Gene ID:	249
Molecular Weight:	65-90 kDa

PROPERTIES

AA Sequence	L V P E K E K D P K Y W R D Q A Q E T L K Y A L E L Q K L N T N V A K N V I M F L G D G M G V S T V T A A R I L K G Q L H H N P G E E T R L E M D K F P F V A L S K T Y N T N A Q V P D S A G T A T A Y L C G V K A N E G T V G V S A A T E R S R C N T T Q G N E V T S I L R W A K D A G K S V G I V T T T R V N H A T P S A A Y A H S A D R D W Y S D N E M P P E A L S Q G C K D I A Y Q L M H N I R D I D V I M G G G R K Y M Y P K N K T D V E Y E S D E K A R G T R L D G L D L V D T W K S F K P R Y K H S H F I W N R T E L L T L D P H N V D Y L L G L F E P G D M Q Y E L N R N N V T D P S L S E M V V V A I Q I L R K N P K G F F L L V E G G R I D H G H H E G K A K Q A L H E A V E M D R A I G Q A G S L T S S E D T L T V V T A D H S H V F T F G G Y T P R G N S I F G L A P M L S D T D K K P F T A I L Y G N G P G Y K V V G G E R E N V S M V D Y A H N N Y Q A Q S A V P L R H E T H G G E D V A V F S K G P M A H L L H G V H E Q N Y V P H V M A Y A A C I G A N L G H C A P A S S
Biological Activity	Measured by its ability to cleave the substrate p-nitrophenylphosphate.The specific activity is 157 nmol/min/μg.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl,1 mM DTT,1 mM EDTA,500 mM NaCl,0.1% Trition X-100, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Hypophosphatasia is the inborn error of metabolism characterized by low serum alkaline phosphatase activity (hypophosphatasaemia). This biochemical hallmark reflects loss-of-function mutations within the gene that encodes the tissue-nonspecific isoenzyme of alkaline phosphatase (TNSALP). TNSALP is a cell-surface homodimeric phosphohydrolase that is richly expressed in the skeleton, liver, kidney and developing teeth. In hypophosphatasia, extracellular accumulation of TNSALP natural substrates includes inorganic pyrophosphate, an inhibitor of mineralization, which explains the dento-osseous and arthritic complications featuring tooth loss, rickets or osteomalacia, and calcific arthopathies[1].

REFERENCES

[1]. Michael P Whyte. Hypophosphatasia - aetiology, nosology, pathogenesis, diagnosis and treatment. Nat Rev Endocrinol. 2016 Apr;12(4):233-46.

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