abcam

Product datasheet

Recombinant Human ENPP1/PC1 protein ab167943

1 References 1 Image

Description

Product name	Recombinant Human ENPP1/PC1 protein
Purity	> 95 % Densitometry. ab167943 was purifed using Ni-NTA chromatography.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	P22413
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	ASKPSCAKEV KSCKGRCFER TFGNCRCDAA CVELGNCCLD YQETCIEPEH IWTCNKFRCG EKRLTRSLCA CSDDCKDKGD CCINYSSVCQ GEKSWVEEPC ESINEPQCPA GFETPPTLLF SLDGFRAEYL HTWGGLLPVI SKLKKCGTYT KNMRPVYPTK TFPNHYSIVT GLYPESHGII DNKMYDPKMN ASFSLKSKEK FNPEWYKGEP IWVTAKYQGL KSGTFFWPGS DVEINGIFPD IYKMYNGSVP FEERILAVLQ WLQLPKDERP HFYTLYLEEP DSSGHSYGPV SSEVIKALQR VDGMVGMLMD GLKELNLHRC LNLILISDHG MEQGSCKKYI YLNKYLGDVK NIKVIYGPAA RLRPSDVPDK YYSFNYEGIA RNLSCREPNQ HFKPYLKHFL PKRLHFAKSD RIEPLTFYLD PQWQLALNPS ERKYCGSGFH GSDNVFSNMQ ALFVGYGPGF KHGIEADTFE NIEVYNLMCD LLNLTPAPNN GTHGSLNHLL KNPVYTPKHP KEVHPLVQCP FTRNPRDNLG CSCNPSILPI EDFQTQFNLT VAEEKIIKHE TLPYGRPRVL QKENTICLLS QHQFMSGYSQ DILMPLWTSY TVDRNDSFST EDFSNCLYQD FRIPLSPVHK CSFYKNNTKV SYGFLSPPQL NKNSSGIYSE ALLTTNIVPM YQSFQVIWRY FHDTLLRKYA EERNGVNVVS GPVFDFDYDG RCDSLENLRQ KRRVIRNQEI LIPTHFFIVL TSCKDTSQTP LHCENLDTLA FILPHRTDNS ESCVHGKHDS SWVEELLMLH RARITDVEHI

TGLSFYQQRK EPVSDILKLK THLPTFSQED GPKLHHHHHH

Predicted molecular weight	97 kDa including tags
Amino acids	98 to 925
Tags	His tag C-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab167943** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Western blot ELISA SDS-PAGE
Form	Lyophilized
Additional notes	This product was previously labelled as ENPP1

Preparation and Storage

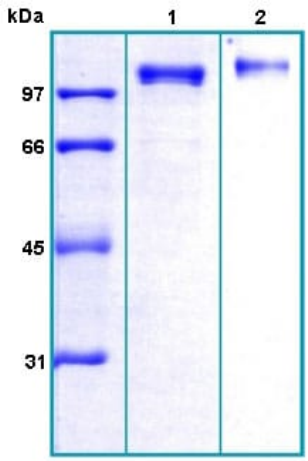
Stability and Storage	Shipped at 4°C. Store at -80°C. Constituents: 99% Phosphate Buffer, 0.43% Sodium chloride
Reconstitution	Add 200µl deionized water to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

General Info

Function	Involved primarily in ATP hydrolysis at the plasma membrane. Plays a role in regulating pyrophosphate levels, and functions in bone mineralization and soft tissue calcification. In vitro, has a broad specificity, hydrolyzing other nucleoside 5' triphosphates such as GTP, CTP, TTP and UTP to their corresponding monophosphates with release of pyrophosphate and diadenosine polyphosphates, and also 3',5'-cAMP to AMP. May also be involved in the regulation of the availability of nucleotide sugars in the endoplasmic reticulum and Golgi, and the regulation of purinergic signaling. Appears to modulate insulin sensitivity.
Tissue specificity	Expressed in plasma cells and also in a number of non-lymphoid tissues, including the distal convoluted tubule of the kidney, chondrocytes and epididymis.
Involvement in disease	Defects in ENPP1 are a cause of increased susceptibility for ossification of the posterior longitudinal ligament of the spine (OPLL) [MIM:602475]. OPLL is a common form of human myelopathy with a prevalence of as much as 4% in a variety of ethnic groups. Defects in ENPP1 are the cause of arterial calcification of infancy, generalized, type 1 (GACI1) [MIM:208000]. A severe autosomal recessive disorder characterized by calcification of the internal elastic lamina of muscular arteries and stenosis due to myointimal proliferation. The disorder is often fatal within the first 6 months of life because of myocardial ischemia resulting in

	refractory heart failure. Defects in ENPP1 are associated with obesity, glucose intolerance, and type II diabetes non-insulin dependent (NIDDM) [MIM:125853]. Defects in ENPP1 are the cause of rickets hypophosphatemic autosomal recessive type 2 (ARHR2) [MIM:613312]. ARHR2 is a hereditary form of hypophosphatemic rickets, a disorder of proximal renal tubule function that causes phosphate loss, hypophosphatemia and skeletal deformities, including rickets and osteomalacia unresponsive to vitamin D. Symptoms are bone pain, fractures and growth abnormalities.
Sequence similarities	Belongs to the nucleotide pyrophosphatase/phosphodiesterase family. Contains 2 SMB (somatomedin-B) domains.
Domain	The di-leucine motif is required for basolateral targeting in epithelial cells, and for targeting to matrix vesicles derived from mineralizing cells.
Post-translational modifications	Autophosphorylated as part of the catalytic cycle of phosphodiesterase/pyrophosphatase activity. N-glycosylated. It has been suggested that the active SMB domain may be permitted considerable disulfide bond heterogeneity or variability, thus two alternate disulfide patterns based on 3D structures are described with 1 disulfide bond conserved in both.
Cellular localization	Membrane. Basolateral cell membrane. Targeted to the basolateral membrane in polarized epithelial cells and in hepatocytes, and to matrix vesicles in osteoblasts. In bile duct cells and cancer cells, located to the apical cytoplasmic side.

Images



SDS-PAGE - Recombinant Human ENPP1/PC1 protein (ab167943)

10% SDS-PAGE analysis of ab167943.

Lane 1: reduced and boiled sample, 2.5µg/lane.

Lane 2: non-reduced and non-boiled sample, 2.5µg/lane.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors