

Datasheet for ABIN3113169

ENPP1 Protein (AA 1-925) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	ENPP1
Protein Characteristics:	AA 1-925
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ENPP1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MERDGCAGGG SRGGEGRAP REGPAGNGRD RGRSHAAEAP GDPQAAASLL APMDVGEEPL EKAARARTAK DPNTYKVLST VLSVCVLTTI LGCIFGLKPS CAKEVKSCCKG RCFERTFGNC RCDAAACVELG NCCLDYQETC IEPEHIWTCN KFRGCEKRLT RSLCACSDDC KDKGDCCINY SSVCQGEKSW VEEPCESINE PQCPAGFETP PTLLFSLDGF RAEYLHTWGG LLPVISKLKK CGTYTKNMRP VYPTKTFPNH YSIVTGLYPE SHGIIDNKMY DPKMNASFSL KSKEKFNPEW YKGEPIWVTA KYQGLKSGTF FWPGSDVEIN GIFPDIYKMY NGSVPFEERI LAVLQWLQLP KDERPHFYTL YLEEDSSGH SYGPVSSEVI KALQRVDGMV GMLMDGLKEL NLHRCLNLIL ISDHGMEQGS CKKYIYLNKY LGDVKNIKVI YGPAARLRPS DVPDKYYSFN YEGIARNLSC REPQNHFQPY LKHFLPKRLH FAKSDRIEPL TFYLDQPWQL ALNPSEKRYC GSGFHGSDNV FSNMQALFVG YGPGFKHGIE ADTFENIEVY NLMCDLLNLT PAPNNGTHGS LNHLLKNPVY TPKHPKEVHP LVQCPFTRNP RDNLCSCSNP SILPIEDFQT QFNLTVAEEK IIKHETLPYG RPRVLQKENT ICLLSQHQFM SGYSQDILMP LWTSYTVDRN DSFSTEDFSN CLYQDFRIPL
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SPVHKCSFYK NNTKVSYGFL SPPQLNKNSS GIYSEALLTT NIVPMYQSFQ VIWRYFHDTL
LRKYAEERNG VNVVSGPVFD FDYDGRCDL ENLRQKRRVI RNQEILIPTH FFIVLTSCKD
TSQTPLHCEN LDTLAFILPH RTDNSESCVH GKHDSSWVEE LLMLHRARIT DVEHITGLSF
YQQRKEPVSD ILKLKTHLPT FSQED

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

Product Details

- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	ENPP1
Alternative Name:	ENPP1 (ENPP1 Products)
Background:	Ectonucleotide pyrophosphatase/phosphodiesterase family member 1 (E-NPP 1) (Membrane component chromosome 6 surface marker 1) (Phosphodiesterase I/nucleotide pyrophosphatase 1) (Plasma-cell membrane glycoprotein PC-1) [Cleaved into: Ectonucleotide pyrophosphatase/phosphodiesterase family member 1, secreted form] [Includes: Alkaline phosphodiesterase I (EC 3.1.4.1), Nucleotide pyrophosphatase (NPPase) (EC 3.6.1.9) (Nucleotide diphosphatase)],FUNCTION: Nucleotide pyrophosphatase that generates diphosphate (PPi) and functions in bone mineralization and soft tissue calcification by regulating pyrophosphate levels (By similarity). PPi inhibits bone mineralization and soft tissue calcification by binding to nascent hydroxyapatite crystals, thereby preventing further growth of these crystals (PubMed:11004006). Preferentially hydrolyzes ATP, but can also hydrolyze other nucleoside 5' triphosphates such as GTP, CTP and UTP to their corresponding monophosphates with release of pyrophosphate, as well as diadenosine polyphosphates, and also 3',5'-cAMP to AMP (PubMed:27467858, PubMed:8001561, PubMed:25344812, PubMed:28011303, PubMed:35147247). 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 (PubMed:27467858, PubMed:8001561). Inhibits ectopic joint calcification and maintains articular chondrocytes by repressing hedgehog signaling, it is however unclear

Target Details

whether hedgehog inhibition is direct or indirect (By similarity). Appears to modulate insulin sensitivity and function (PubMed:10615944). Also involved in melanogenesis (PubMed:28964717). Also able to hydrolyze 2',3'-cGAMP (cyclic GMP-AMP), a second messenger that activates TMEM173/STING and triggers type-I interferon production (PubMed:25344812). 2',3'-cGAMP degradation takes place in the lumen or extracellular space, and not in the cytosol where it is produced, the role of 2',3'-cGAMP hydrolysis is therefore unclear (PubMed:25344812). Not able to hydrolyze the 2',3'-cGAMP linkage isomer 3'-3'-cGAMP (PubMed:25344812). {ECO:0000250|UniProtKB:P06802, ECO:0000269|PubMed:10615944, ECO:0000269|PubMed:25344812, ECO:0000269|PubMed:27467858, ECO:0000269|PubMed:28011303, ECO:0000269|PubMed:28964717, ECO:0000269|PubMed:35147247, ECO:0000269|PubMed:8001561, ECO:0000305|PubMed:11004006}.

Molecular Weight: 104.9 kDa

UniProt: [P22413](#)

Pathways: [Regulation of Carbohydrate Metabolic Process](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process