

Datasheet for ABIN3086024 PEX5 Protein (AA 1-639) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	PEX5
Protein Characteristics:	AA 1-639
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PEX5 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MAMRELVEAE CGGANPLMKL AGHFTQDKAL RQGLRPGPW PPGAPASEAA SKPLGVASED
ELVAEFLQDQ NAPLVSRAPQ TFKMDDLAE MQQIEQSNFR QAPQRAPGVA DLALSENWAQ
EFLAAGDAVD VTQDYNEDW SQEFISEVTD PLSVSPARWA EEYLEQSEEK LWLGEPEGTA
TDRWYDEYHP EEDLQHTASD FVAKVDDPKL ANSEFLKFVR QIGEGQVSLE SGAGSGRAQA
EQWAAEFIQQ QGTSDAWVDQ FTRPVNTSAL DMEFERAKSA IESDVDFWDK LQAELEEMAK
RDAAEHPWLS DYDDLTSATY DKG YQFEEEN PLRDHPQPFE EGLRRLQEGD LPNAVLLFEA
AVQQDPKHME AWQYL GTTQA ENEQELLAIS ALRRCLELKP DNQTALMALA VSFTNESLQR
QACETLRDWL RYTPAYAHLV TPAEEGAGGA GLGPSKRILG SLLSDSLFLE VKELFLAAVR
LDPTSIDPDV QCGLGVLFNL SGEYDKAVDC FTAALSVRPN DYLLWNKLGA TLANGNQSEE
AVAAYRRAL E LQPGYIRSR YNLGISCINLG AHREAVEHFL EALNMQRKSR GPRGEGGAMS
ENIWSTLRLA LSMLGQSDAY GAADARDLST LLTMFGLPQ

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.
- 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

Product Details

- 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:	PEX5
Alternative Name:	PEX5 (PEX5 Products)
Background:	<p>Peroxisomal targeting signal 1 receptor (PTS1 receptor) (PTS1R) (PTS1-BP) (Peroxin-5) (Peroxisomal C-terminal targeting signal import receptor) (Peroxisome receptor 1),FUNCTION: Receptor that mediates peroxisomal import of proteins containing a C-terminal PTS1-type tripeptide peroxisomal targeting signal (SKL-type) (PubMed:7706321, PubMed:7719337, PubMed:7790377, PubMed:11336669, PubMed:12456682, PubMed:16314507, PubMed:21976670, PubMed:26344566, PubMed:11101887, PubMed:17157249, PubMed:17428317). Binds to cargo proteins containing a PTS1 peroxisomal targeting signal in the cytosol, and translocates them into the peroxisome matrix by passing through the PEX13-PEX14 docking complex along with cargo proteins (PubMed:12456682, PubMed:21976670, PubMed:26344566, PubMed:17157249). PEX5 receptor is then retrotranslocated into the cytosol, leading to release of bound cargo in the peroxisome matrix, and reset for a subsequent peroxisome import cycle (PubMed:11336669, PubMed:24662292).</p> <p>{ECO:0000269 PubMed:11101887, ECO:0000269 PubMed:11336669, ECO:0000269 PubMed:12456682, ECO:0000269 PubMed:16314507, ECO:0000269 PubMed:17157249, ECO:0000269 PubMed:17428317, ECO:0000269 PubMed:21976670, ECO:0000269 PubMed:24662292, ECO:0000269 PubMed:26344566, ECO:0000269 PubMed:7706321, ECO:0000269 PubMed:7719337, ECO:0000269 PubMed:7790377},, FUNCTION: [Isoform 1]: In addition to promoting peroxisomal translocation of proteins containing a PTS1 peroxisomal targeting signal, mediates peroxisomal import of proteins containing a C-terminal PTS2-type peroxisomal targeting signal via its interaction with PEX7 (PubMed:9668159, PubMed:11336669, PubMed:11546814, PubMed:25538232, PubMed:33389129). Interaction with PEX7 only takes place when PEX7 is associated with cargo proteins containing a PTS2</p>

Target Details

peroxisomal targeting signal (PubMed:25538232). PEX7 along with PTS2-containing cargo proteins are then translocated through the PEX13-PEX14 docking complex together with PEX5 (PubMed:25538232). {ECO:0000269|PubMed:11336669, ECO:0000269|PubMed:11546814, ECO:0000269|PubMed:25538232, ECO:0000269|PubMed:33389129, ECO:0000269|PubMed:9668159}., FUNCTION: [Isoform 2]: Does not mediate translocation of peroxisomal import of proteins containing a C-terminal PTS2-type peroxisomal targeting signal. {ECO:0000269|PubMed:11546814}.

Molecular Weight: 70.9 kDa

UniProt: [P50542](#)

Pathways: [Monocarboxylic Acid Catabolic 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.

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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.

Handling

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