

Datasheet for ABIN3119107

**TPCN1 Protein (AA 1-816) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

|                               |                                                |
|-------------------------------|------------------------------------------------|
| Quantity:                     | 1 mg                                           |
| Target:                       | TPCN1                                          |
| Protein Characteristics:      | AA 1-816                                       |
| Origin:                       | Human                                          |
| Source:                       | Tobacco (Nicotiana tabacum)                    |
| Protein Type:                 | Recombinant                                    |
| Purification tag / Conjugate: | This TPCN1 protein is labelled with Strep Tag. |
| Application:                  | Western Blotting (WB), ELISA, SDS-PAGE (SDS)   |

## Product Details

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| Sequence: | MAVSLDDDDVP LILTLDEGGS APLAPSNGLG QEELPSKNGG SYAIHDSQAP SLSSGGESSP<br>SSPAHNWEMN YQEAAYLQE GENNDKFFTH PKDAKALAAY LFAHNHLFY L MELATALLLL<br>LLSLCEAPAV PALRLGIYVH ATLELFALMV VV FELCMKLR WLGLHTFIRH KRTMVKTSVL<br>VVQFVEAIVV LVRQMSHVRV TRALRCIFLV DCRYCGGVRR NLRQIFQSLP PFMDILLLLL<br>FFMIIFAILG FYLFSPNPSD PYFSTLENSI VSLFVLLTTA NFPDVMMP SY SRNPWSCVFF<br>IVYLSIELYF IMNLLLAVVF DTFNDIEKRK FKSLLHKKRT AIQHAYRLLI SQRRPAGISY<br>RQFEGLMRFY KPRMSARERY LTFKALNQNN TPLLCLKDFY DIYEVAALKW KAKKNREHWF<br>DELPRTALLI FKGINILVKS KAFQYFMYLV VAVNGVWILV ETFMLKGGNF FSKHVPWSYL<br>VFLTIIYGVEL FLKVAGLGPV EYLSSGWNLF DFSVTVFAFL GLLALALNME PFYFIVVLRP<br>LQLRLFKLK ERYRNVLDTM FELLPRMASL GLTLLIFYYS FAIVGMEFFC GIVFPNCCNT<br>STVADAYRWR NHTVGNRTVV EEGYYLNNF DNILNSFVTL FELTVVNNWY IIMEGVTSQT<br>SHWSRLYFMT FYIVTMVVM T IIVAFILEAF VFRMNYSRKN QDSEVDGGIT LEKEISKEEL |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

VAVLELYREA RGASSDVTRL LETLSQMERY QQHSMVFLGR RSRTKSDL SL KMYQEEIQEW  
YEEHAREQEQ QRQLSSSAAP AAQPPGSRQ RSQTVT

**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.**

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### 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.

## Product Details

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Purification:    | Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALICE®):<br><br>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.<br>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

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Target:           | TPCN1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Alternative Name: | TPCN1 ( <a href="#">TPCN1 Products</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Background:       | <p>Two pore channel protein 1 (Two pore calcium channel protein 1) (Voltage-dependent calcium channel protein TPC1),FUNCTION: Intracellular channel initially characterized as a non-selective Ca(2+)-permeable channel activated by NAADP (nicotinic acid adenine dinucleotide phosphate), it is also a voltage-gated highly-selective Na(+) channel activated directly by PI(3,5)P2 (phosphatidylinositol 3,5-bisphosphate) that senses pH changes and confers electrical excitability to organelles (PubMed:19620632, PubMed:23063126, PubMed:24776928, PubMed:23394946). Localizes to the early and recycling endosomes membranes where it plays a role in the uptake and processing of proteins and regulates organellar membrane excitability, membrane trafficking and pH homeostasis (PubMed:23394946) (Probable). Ion selectivity is not fixed but rather agonist-dependent and under defined ionic conditions, can be readily activated by both NAADP and PI(3,5)P2 (Probable). Required for mTOR-dependent nutrient sensing (PubMed:23394946) (Probable). {ECO:0000269 PubMed:19620632, ECO:0000269 PubMed:23063126, ECO:0000269 PubMed:23394946, ECO:0000269 PubMed:24776928, ECO:0000305 PubMed:32679067}., FUNCTION: (Microbial infection) During Ebola virus (EBOV) infection, controls the movement of endosomes containing virus particles and is required by EBOV to escape from the endosomal network into the cell cytoplasm. {ECO:0000269 PubMed:25722412}.</p> |
| Molecular Weight: | 94.1 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| UniProt:          | <a href="#">Q9ULQ1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Application Details

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| 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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| Comment: | <p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p> |
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|---------------|-----------------------|
| Restrictions: | For Research Use only |
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## 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)                                                                                     |



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