

Datasheet for ABIN3096001

**Transportin 1 Protein (TNPO1) (AA 1-898) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	Transportin 1 (TNPO1)
Protein Characteristics:	AA 1-898
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Transportin 1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

## Product Details

Sequence:	MVWDRQTKME YEWKPDEQGL QQILQLLKES QSPDTTIQRT VQQKLEQLNQ YPDFNNYLIF VLTKLKSEDE PTRSLSGLIL KNNVKAHFQN FPNGVTDFIK SECLNNIGDS SPLIRATVGI LITTIASKGE LQNWPDLLPK LCSLLDSEDY NTCEGAFGAL QKICEDSAEI LDSVDLDRPL NIMIPKFLQF FKHSSPKIRS HAVACVNQFI ISRTQALMLH IDSFLENLFA LAGDEEPEVR KNVCRALVML LEVRMDRLLP HNMHNIVEYML QRTQDQDENV ALEACEFWLT LAEQPICKDV LVRHLPKLIP VLVNGMKYSD IDIILLKGDV EEDETIPDSE QDIRPRFHRS RTVAQQHDED GIEEEDDDDD EIDDDDTISD WNLRKCSAAA LDVLANVYRD ELLPHILPLL KELLFHHEWV VKESGILVLG AIAEGCMQGM IPYLPeliph LIQCLSDKKA LVRSITCWTL SRYAHWVVSQ PPDTYLKPLM TELLKRILDS NKRVQEAACS AFATLEEEAC TELVPYLAYI LDTLVFAFSK YQHKNLLILY DAIGTLADSV GHHLNKPEYI QMLMPPLIQK WNMLKDEDKD LFPLLECLSS VATALQSGFL PYCEPVYQRC VNLVQKTLAQ AMLNNAQPDQ YEAPDKDFMI VALDLLSGLA EGLGGNIEQL VARSNILTLM YQCMQDKMPE VRQSSFALLG DLTKACFQHV KPCIADFMPI
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LGTNLNPEFI SVCNNATWAI GEISIQMGIE MQPYIPMVLH QLVEIINRPN TPKTLLENTA  
ITIGRLGYVC PQEVAPMLQQ FIRPWCTSLR NIRDNEEKDS AFRGICTMIS VNPSGVIQDF  
IFFCDAVASW INPKDDL RDM FCKILHGFKN QVGDENWRRF SDQFPLPLKE RLAAFYGV

**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

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:	Transportin 1 (TNPO1)
Alternative Name:	TNPO1 ( <a href="#">TNPO1 Products</a> )
Background:	<p>Transportin-1 (Importin beta-2) (Karyopherin beta-2) (M9 region interaction protein) (MIP),FUNCTION: Functions in nuclear protein import as nuclear transport receptor. Serves as receptor for nuclear localization signals (NLS) in cargo substrates (PubMed:24753571). May mediate docking of the importin/substrate complex to the nuclear pore complex (NPC) through binding to nucleoporin and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to the importin, the importin/substrate complex dissociates and importin is re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran. The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus (By similarity). Involved in nuclear import of M9-containing proteins. In vitro, binds directly to the M9 region of the heterogeneous nuclear ribonucleoproteins (hnRNP), A1 and A2 and mediates their nuclear import. Involved in hnRNP A1/A2 nuclear export. Mediates the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5 (PubMed:11682607). In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones (By similarity). In vitro, mediates nuclear import of SRP19 (PubMed:11682607). Mediates nuclear import of ADAR/ADAR1 isoform 1 and isoform 5 in a RanGTP-dependent manner (PubMed:19124606, PubMed:24753571). {ECO:0000250 UniProtKB:Q8BFY9, ECO:0000269 PubMed:11682607, ECO:0000269 PubMed:19124606, ECO:0000269 PubMed:24753571, ECO:0000269 PubMed:8986607, ECO:0000269 PubMed:9687515}., FUNCTION: (Microbial infection) In case of HIV-1 infection,</p>

## Target Details

	binds and mediates the nuclear import of HIV-1 Rev. {ECO:0000269 PubMed:16704975}.
Molecular Weight:	102.4 kDa
UniProt:	<a href="#">Q92973</a>
Pathways:	<a href="#">PI3K-Akt Signaling</a> , <a href="#">Fc-epsilon Receptor Signaling Pathway</a> , <a href="#">EGFR Signaling Pathway</a> , <a href="#">Neurotrophin Signaling Pathway</a> , <a href="#">Cellular Glucan Metabolic Process</a> , <a href="#">Protein targeting to Nucleus</a> , <a href="#">CXCR4-mediated Signaling Events</a>

## 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:	<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>
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)



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