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Datasheet for ABIN3125942  
**TAB1 Protein (AA 1-502) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	TAB1
Protein Characteristics:	AA 1-502
Origin:	Mouse
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This TAB1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

### Product Details

Sequence: MAAQRRSLLQ SEQQPSWTDD LPLCHLSGVG SASNRSYSAD GKGTESHPPE DNWLKFRSEN  
NCFLYGVFNG YDGNRVTNFV AQRLSAELLL GQLNTEHTEA DVRRVLLQAF DVVERSFLES  
IDDALA EKAS LQSQLPEGVP QHQLPPQYQK ILERLKALER EISGGAMAVV AVLLNSKLYV  
ANVGTNRALL CKSTVDGLQV TQLNMDHTTE NEDELFRSLQ LGLDAGKIKQ MGVICGQEST  
RRIGDYKVKY GYTDIDLLSA AKSKPIIAEP EIHGAPLDG VTGFLVLMSE GLYKALEAAH  
GPGQANQEIA AMIDTEFAKQ TSLDAVAQAV VDRVKRIHSD TFASGGERAK FCPRHEDMTL  
LVRNFGYPLG EMSQPTPTPA PGGRVYPVSV PYSSAQSTSK TSVTLVSLVMP SQGQMVNGSH  
SASTLDEATP TLTNQSPTLT LQSTNTHHTQS SSSSSDGGLF RSRPAHSLPP GEDGRVEPYV  
DFAEFYRLWS VDHGEQSVMT AP

**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.

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### 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

## Product Details

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Western blot.

Purity:  $\geq 80\%$  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: TAB1

Alternative Name: Tab1 ([TAB1 Products](#))

Background: TGF-beta-activated kinase 1 and MAP3K7-binding protein 1 (Mitogen-activated protein kinase kinase kinase 7-interacting protein 1) (TGF-beta-activated kinase 1-binding protein 1) (TAK1-binding protein 1),FUNCTION: Key adapter protein that plays an essential role in JNK and NF-kappa-B activation and proinflammatory cytokines production in response to stimulation with TLRs and cytokines (PubMed:12464436, PubMed:28073917). Mechanistically, associates with the catalytic domain of MAP3K7/TAK1 to trigger MAP3K7/TAK1 autophosphorylation leading to its full activation (PubMed:37832545). Similarly, associates with MAPK14 and triggers its autophosphorylation and subsequent activation (PubMed:24037507). In turn, MAPK14 phosphorylates TAB1 and inhibits MAP3K7/TAK1 activation in a feedback control mechanism. Plays also a role in recruiting MAPK14 to the TAK1 complex for the phosphorylation of the TAB2 and TAB3 regulatory subunits (By similarity). {ECO:0000250|UniProtKB:Q15750, ECO:0000269|PubMed:12464436, ECO:0000269|PubMed:24037507, ECO:0000269|PubMed:28073917, ECO:0000269|PubMed:37832545}.

Molecular Weight: 54.6 kDa

UniProt: [Q8CF89](#)

Pathways: [TLR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [Activation of Innate immune Response](#), [Toll-Like Receptors Cascades](#)

## 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.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

## Application Details

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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!

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Restrictions: For Research Use only

## Handling

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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)