

Datasheet for ABIN3088253
SH3BP1 Protein (AA 1-701) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	SH3BP1
Protein Characteristics:	AA 1-701
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SH3BP1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MMKRQLHRMR QLAQTGSLGR TPETAEFLGE DLLQVEQRLE PAKRAAHNIH KRLQACLQGQ SGADM DKRVK KLPLMALSTT MAESFKELDP DSSMGKALEM SCAIQNQLAR ILAEFEMTLE RDVLQPLSRL SEEELPAILK HKKSLQKLVS DWNTLKSRLS QATKNSGSSQ GLGGSPGSHS HTTMANKVET LKEEEEEELKR KVEQCRDEYL ADLYHFVTKE DSYANYFIRL LEIQADYHRR SLSSLDALA ELRENHGQAD HSPSMTATHF PRVYGVSLAT HLQELGREIA LPIEACVMML LSEGMKEEGL FRLAAGASVL KRLKQTMASD PHSLEEFCS D PHAVAGALKS YLRELPEPLM TFDLYDDWMMR AASLKEPGAR LQALQEVCSR LPPENLSNLR YLMKFLARLA EEQEVNKMTP SNIAIVLGP N LLWPPEKEGD QAQLDAASVS SIQVVGVEA LIQSADTLFP GDINFNVSGL FSAVTLQDTV SDRLASEELP STAVPTPATT PAPAPAPAPA PAPALASAAT KERTESEVPP RPASPKVTRS PPETAAPVED MARRTKRPAP ARPTMPPPQV SGSRSSPPAP PLPPGSGSPG TPQALPRLV GSSLRAPTV PPLPPTPPQP ARRQSRRSPA SPSPASGPA SPSPVLSNP AQVDLGAATA EGGAPEAISG VPTPPAIPPQ PRPRSLASET N
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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®):

Product Details

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: SH3BP1

Alternative Name: SH3BP1 ([SH3BP1 Products](#))

Background: SH3 domain-binding protein 1,FUNCTION: GTPase activating protein (GAP) which specifically converts GTP-bound Rho-type GTPases including RAC1 and CDC42 in their inactive GDP-bound form. By specifically inactivating RAC1 at the leading edge of migrating cells, it regulates the spatiotemporal organization of cell protrusions which is important for proper cell migration (PubMed:21658605). Also negatively regulates CDC42 in the process of actin remodeling and the formation of epithelial cell junctions (PubMed:22891260). Through its GAP activity toward RAC1 and/or CDC42 plays a specific role in phagocytosis of large particles. Specifically recruited by a PI3 kinase/PI3K-dependent mechanism to sites of large particles engagement, inactivates RAC1 and/or CDC42 allowing the reorganization of the underlying actin cytoskeleton required for engulfment (PubMed:26465210). It also plays a role in angiogenesis and the process of repulsive guidance as part of a semaphorin-plexin signaling pathway. Following the binding of PLXND1 to extracellular SEMA3E it dissociates from PLXND1 and inactivates RAC1, inducing the intracellular reorganization of the actin cytoskeleton and the collapse of cells (PubMed:24841563). {ECO:0000269|PubMed:21658605, ECO:0000269|PubMed:22891260, ECO:0000269|PubMed:24841563, ECO:0000269|PubMed:26465210}.

Molecular Weight: 75.7 kDa

UniProt: [Q9Y3L3](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

Application Details

	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