



[Go to Product page](#)

Datasheet for ABIN3136560

Shootin-1 (SHTN1) (AA 1-631) protein (Strep Tag)

Overview

Quantity:	1 mg
Target:	Shootin-1 (SHTN1)
Protein Characteristics:	AA 1-631
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	Strep Tag
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MNSSDEEKQL QLITSLKEQA IGEYEDLRAE NQKTKEKCDK IRQERDEAVK KLEEFQKISH
 MVIEEVNFMQ NHLEIEKTCR ESAEALATKL NKENKTLKRI SMLYMAKLGP DVITEEINID
 DDDPATDTDA AAETCVSVQC QKQIKELRDQ IVSVQEEKKV LAIELENLKS KLGEVMEEVN
 KVKQEKAVLN SEVLEQRKVL EKCNRVSMVA VEEYEELQVN LELEKDLRKK AESFAQEMFI
 EQNKLKRQSH LLLQSSLPDQ QLLKALDENA KLIQQLEEEER IQHQKKVKEL EERLENEALH
 KEIHNLRQQL ELLEDDKREL EQKYQSSEK ARNLKHSVDE LQKRVNQRSEN SVPPPPPPPP
 PLPPPPPNPI RSLMSMIRKR SHPSGNSAKK EKTTQPETA EVDLKRQAV EEMMDRIKKG
 VHLRPVNQTA RPKAKPDSLK GSESAVDELK GILGTLNKST SSRSLKSLGP ENSETELERI
 LRRRKLTAEA DSSSPTGILA TSESKSMPVL GSVSSVTKSA LNKKTLEAEF NNPCLTPEP
 GEGPRKLEGC TNPKVTFQPP SKGGYRRKCV GSENQAEPVV VLDPVSTHEP QTKDQAAEKD
 PTQFEEEGGE TQPEYKEDSG GKTGETDSSN C

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
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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: $\geq 80\%$ as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target: Shootin-1 (SHTN1)

Alternative Name: Shtn1 ([SHTN1 Products](#))

Background: Shootin-1 (Shootin1),FUNCTION: Involved in the generation of internal asymmetric signals required for neuronal polarization and neurite outgrowth (PubMed:23864681). Mediates netrin-1-induced F-actin-substrate coupling or 'clutch engagement' within the axon growth cone through activation of CDC42, RAC1 and PAK1-dependent signaling pathway, thereby converting the F-actin retrograde flow into traction forces, concomitantly with filopodium extension and axon outgrowth. Plays a role in cytoskeletal organization by regulating the subcellular localization of phosphoinositide 3-kinase (PI3K) activity at the axonal growth cone. Also plays a role in regenerative neurite outgrowth (By similarity). In the developing cortex, cooperates with KIF20B to promote both the transition from the multipolar to the bipolar stage and the radial migration of cortical neurons from the ventricular zone toward the superficial layer of the neocortex (PubMed:23864681). Involved in the accumulation of phosphatidylinositol 3,4,5-trisphosphate (PIP3) in the growth cone of primary hippocampal neurons (PubMed:23864681). {ECO:0000250|UniProtKB:A0MZ67, ECO:0000269|PubMed:23864681}.

Molecular Weight: 71.3 kDa

UniProt: [Q8K2Q9](#)

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: 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

Application Details

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!

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)