

Datasheet for ABIN3092621

**FNIP1 Protein (AA 1-1166) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	FNIP1
Protein Characteristics:	AA 1-1166
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This FNIP1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Sequence:	<p>MAPTLFQKLF SKRTGLGAPG RDARDPCGF SWPLPEFDPS QIRLIVYQDC ERRGRNVLFD SSVKRRNEDI SVSKLGSDAQ VKVFGKCCQL KPGGDSSSSL DSSVTSSSDI KDQCLKYQGS RCSSDANMLG EMMFGSVAMS YKGSTLKIHQ IRSPQLMLS KVFTARTGSS ICGSLNTLQD SLEFINQDNN TLKADNNTVI NGLLGNIIGLS QFCSPRRAFS EQGPLRLIRS ASFFAVHNSP MDMPGRELNE DRDSGIARSA SLSSLLITPF PSPNSSLTRS CASSYQRRWR RSQTTSENG VFPRWSIEES FNLDESCGP NPGIVRKKKI AIGVIFSLSK DEDENNKFNE FFFSHFPLFE SHMNKLKSAI EQAMKMSRRS ADASQRSLAY NRIVDALNEF RTTICNLYTM PRIGEPVWLT MMSGTPEKNH LCYRFMKEFT FLMENASKNQ FLPALITAVL TNHLAWVPTV MPNGQPPIKI FLEKHSSQSV DMLAKTHPYN PLWAQLGDLY GAIGSPVRLA RTVVVGKRQD MVQRLLYFLT YFIRCSELQE THLLENGEDE AIVMPGTVIT TTLEKGEIEE SEYVLVTMHR NKSSLLFKES EEIRTPNCNC KYCSHPLLQ NVENISQQR EDIQNSSKEL LGISDECQMI SPSPDCQEENA VDVKQYRDKL RTCFDAKLET VVCTGSVPVD KCALSESGL STEETWQSEK LLDSDSHTGK</p>
-----------	---

AMRSTGMVVE KKPPDKIVPA SFSCEAAQTK VTFLIGDSMS PDSDELRSQ AVVDQITRHH  
TKPLKEERGA IDQHQETKQT TKDQSGESDT QNMVSEEPCE LPCWNHSDPE SMSLFDEYFN  
DDSIETRTID DVPFKTSTDS KDHCCMLEFS KILCTKNNKQ NNEFCKCIET VPQDSCKTCF  
PQQDQRDTLS ILVPHGDKES SDKKIAVGTE WDIPRNESSD SALGDSESED TGHDMTQRVS  
SYYGGEQEDW AEEDEIPFPG SKLIEVSAVQ PNIANFGRSL LGGYCSSLVP DFVLQGIGSD  
ERFRQCLMSD LSHAVQHPVL DEPIAEAVCI IADMDKWTVQ VASSQRRVTD NKLKGKVLVS  
SLVSNLLHST LQLYKHNLSF NFCVMHLEDR LQELYFKSKM LSEYLRGQMR VHVKEKLGVL  
GIESDLPLL AAVASTHSPY VAQILL

**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!

## Product Details

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 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:

FNIP1

Alternative Name:

FNIP1 ([FNIP1 Products](#))

Background:

Folliculin-interacting protein 1,FUNCTION: Binding partner of the GTPase-activating protein FLCN: involved in the cellular response to amino acid availability by regulating the non-canonical mTORC1 signaling cascade controlling the MiT/TFE factors TFEB and TFE3 (PubMed:17028174, PubMed:18663353, PubMed:24081491, PubMed:37079666). Required to promote FLCN recruitment to lysosomes and interaction with Rag GTPases, leading to activation of the non-canonical mTORC1 signaling (PubMed:24081491). In low-amino acid conditions, component of the lysosomal folliculin complex (LFC) on the membrane of lysosomes, which inhibits the GTPase-activating activity of FLCN, thereby inactivating mTORC1 and promoting nuclear translocation of TFEB and TFE3 (By similarity). Upon amino acid restimulation, disassembly of the LFC complex liberates the GTPase-activating activity of FLCN, leading to activation of mTORC1 and subsequent inactivation of TFEB and TFE3 (PubMed:37079666). Together with FLCN, regulates autophagy: following phosphorylation by ULK1, interacts with GABARAP and promotes autophagy (PubMed:25126726). In addition to its role in mTORC1 signaling, also acts as a co-chaperone of HSP90AA1/Hsp90: following gradual

## Target Details

phosphorylation by CK2, inhibits the ATPase activity of HSP90AA1/Hsp90, leading to activate both kinase and non-kinase client proteins of HSP90AA1/Hsp90 (PubMed:27353360, PubMed:30699359). Acts as a scaffold to load client protein FLCN onto HSP90AA1/Hsp90 (PubMed:27353360). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (PubMed:27353360). Also acts as a core component of the reductive stress response by inhibiting activation of mitochondria in normal conditions: in response to reductive stress, the conserved Cys degron is reduced, leading to recognition and polyubiquitylation by the CRL2(FEM1B) complex, followed by proteasomal (By similarity). Required for B-cell development (PubMed:32905580). {ECO:0000250|UniProtKB:Q68FD7, ECO:0000250|UniProtKB:Q9P278, ECO:0000269|PubMed:17028174, ECO:0000269|PubMed:18663353, ECO:0000269|PubMed:24081491, ECO:0000269|PubMed:25126726, ECO:0000269|PubMed:27353360, ECO:0000269|PubMed:30699359, ECO:0000269|PubMed:32905580, ECO:0000269|PubMed:37079666}.

Molecular Weight: 130.6 kDa

UniProt: [Q8TF40](#)

## 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 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)

## Images



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