Datasheet for ABIN3096393

WIPI1 Protein (AA 1-446) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	WIPI1
Protein Characteristics:	AA 1-446
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This WIPI1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MEAEAADAPP GGVESALSCF SFNQDCTSLA TGTKAGYKLF SLSSVEQLDQ VHGSNEIPDV YIVERLFSSS LVVVVSHTKP RQMNVYHFKK GTEICNYSYS SNILSIRLNR QRLLVCLEES IYIHNIKDMK LLKTLLDIPA NPTGLCALSI NHSNSYLAYP GSLTSGEIVL YDGNSLKTVC TIAAHEGTLA AITFNASGSK LASASEKGTV IRVFSVPDGQ KLYEFRRGMK RYVTISSLVF SMDSQFLCAS SNTETVHIFK LEQVTNSRPE EPSTWSGYMG KMFMAATNYL PTQVSDMMHQ DRAFATARLN FSGQRNICTL STIQKLPRLL VASSSGHLYM YNLDPQDGGE CVLIKTHSLL GSGTTEENKE NDLRPSLPQS YAATVARPSA SSASTVPGYS EDGGALRGEV IPEHEFATGP VCLDDENEFP PIILCRGNQK GKTKQS **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 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.

Product Details

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:	WIPI1
Alternative Name:	WIPI1 (WIPI1 Products)
Background:	WD repeat domain phosphoinositide-interacting protein 1 (WIPI-1) (Atg18 protein homolog) (WD40 repeat protein interacting with phosphoinositides of 49 kDa) (WIPI 49 kDa),FUNCTION: Component of the autophagy machinery that controls the major intracellular degradation process by which cytoplasmic materials are packaged into autophagosomes and delivered to lysosomes for degradation (PubMed:15602573, PubMed:20114074, PubMed:20484055, PubMed:20639694, PubMed:23088497, PubMed:28561066, PubMed:31271352). Plays an important role in starvation- and calcium-mediated autophagy, as well as in mitophagy (PubMed:28561066). Functions downstream of the ULK1 and PI3-kinases that produce phosphatidylinositol 3-phosphate (PtdIns3P) on membranes of the endoplasmic reticulum once activated (PubMed:28561066). Binds phosphatidylinositol 3-phosphate (PtdIns3P), and maybe other phosphoinositides including PtdIns3,5P2 and PtdIns5P, and is recruited to phagophore assembly sites at the endoplasmic reticulum membranes (PubMed:28561066, PubMed:31271352, PubMed:33499712). There, it assists WIPI2 in the recruitment of ATG12-ATG5-ATG16L1, a complex that directly controls the elongation of the nascent autophagosomal membrane (PubMed:28561066). Together with WDR45/WIPI4, promotes ATG2 (ATG2A or ATG2B)-mediated lipid transfer by enhancing ATG2-association with phosphatidylinositol 3-monophosphate (PI3P)-containing membranes (PubMed:31271352). Involved in xenophagy of Staphylococcus aureus (PubMed:22829830). Invading S.aureus cells become entrapped in autophagosome-like WIPI1 positive vesicles targeted for lysosomal degradation (PubMed:22829830). Also plays a distinct role in controlling the transcription of melanogenic enzymes and melanosome maturation, a process that is distinct from starvation-induced autophagy (PubMed:21317285). May also regulate the trafficking of proteins involved in the mannose-6-phosphate receptor (MPR) recycling pathway (PubMed:15020712). {ECO:0000269|PubMed:15020712, ECO:0000269|PubMed:15602573, ECO:0000269|PubMed:20114074, ECO:0000269|PubMed:20484055, ECO:0000269|PubMed:20639694, ECO:0000269|PubMed:21317285, ECO:0000269|PubMed:22829830, ECO:0000269|PubMed:23088497,

Target Details

	ECO:0000269|PubMed:28561066, ECO:0000269|PubMed:31271352, ECO:0000269|PubMed:33499712}.
Molecular Weight:	48.7 kDa
UniProt:	Q5MNZ9
Pathways:	Nuclear Hormone Receptor Binding, ER-Nucleus Signaling

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)

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

