

Datasheet for ABIN3087943

ATG16L1 Protein (AA 1-607) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	ATG16L1
Protein Characteristics:	AA 1-607
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATG16L1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MSSGLRAADF PRWKRHISEQ LRRRDRLQRQ AFEEIILQYN KLEKSDLHS VLAQKLQAEK</p> <p>HDVPNRHEIS PGHDGTWNDN QLQEMAQLRI KHQEELTELH KKRGEAQLV IDLNNQMQRK</p> <p>DREMQMNEAK IAECQTISD LETECLDLRT KLCDLERANQ TLKDEYDALQ ITFTALEGKL</p> <p>RKTTEENQEL VTRWMAEKAQ EANRLNAENE KDSRRRQARL QKELAEAAKE PLPVEQDDDI</p> <p>EVIVDETS DH TEETSPVRAI SRAATKRLSQ PAGGLDSIT NIFGRRSVSS FPVPQDNVDT</p> <p>HPGSGKEVRV PATALCVFDA HDGEVNAVQF SPGSRLATG GMDRRVKLWE VFGEKCEFKG</p> <p>SLSGSNAGIT SIEFDSAGSY LLAASNDFAS RIWTVDDYRL RHTLTGHSGK VLSAKFLLDN</p> <p>ARIVSGSHDR TLKLWDLRSK VCIKTVFAGS SCNDIVCTEQ CVMSGHFDKK IRFWDIRSES</p> <p>IVREMELLGK ITALDLNPER TELLSCSRDD LLKVIDLRTN AIKQTFAPG FKCGSDWTRV</p> <p>VFSPDGSYVA AGSAEGSLYI WSVLTGKVEK VLSKQHSSSI NAVAWSPSGS HVVSVDKGCK</p> <p>AVLWAQY</p>

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Product Details

Grade: custom-made

Target Details

Target: ATG16L1

Alternative Name: ATG16L1 ([ATG16L1 Products](#))

Background: Autophagy-related protein 16-1 (APG16-like 1),FUNCTION: Plays an essential role in both canonical and non-canonical autophagy: interacts with ATG12-ATG5 to mediate the lipidation to ATG8 family proteins (MAP1LC3A, MAP1LC3B, MAP1LC3C, GABARAPL1, GABARAPL2 and GABARAP) (PubMed:23376921, PubMed:23392225, PubMed:29317426, PubMed:30778222, PubMed:33909989, PubMed:24553140, PubMed:24954904, PubMed:27273576). Acts as a molecular hub, coordinating autophagy pathways via distinct domains that support either canonical or non-canonical signaling (PubMed:29317426, PubMed:30778222). During canonical autophagy, interacts with ATG12-ATG5 to mediate the conjugation of phosphatidylethanolamine (PE) to ATG8 proteins, to produce a membrane-bound activated form of ATG8 (PubMed:23376921, PubMed:23392225, PubMed:24553140, PubMed:24954904, PubMed:27273576). Thereby, controls the elongation of the nascent autophagosomal membrane (PubMed:23376921, PubMed:23392225, PubMed:24553140, PubMed:24954904, PubMed:27273576). Also involved in non-canonical autophagy, a parallel pathway involving conjugation of ATG8 proteins to single membranes at endolysosomal compartments, probably by catalyzing conjugation of phosphatidylserine (PS) to ATG8 (PubMed:33909989). Non-canonical autophagy plays a key role in epithelial cells to limit lethal infection by influenza A (IAV) virus (By similarity). Regulates mitochondrial antiviral signaling (MAVS)-dependent type I interferon (IFN-I) production (PubMed:22749352, PubMed:25645662). Negatively regulates NOD1- and NOD2-driven inflammatory cytokine response (PubMed:24238340). Instead, promotes an autophagy-dependent antibacterial pathway together with NOD1 or NOD2 (PubMed:20637199). Plays a role in regulating morphology and function of Paneth cell (PubMed:18849966). {ECO:0000250|UniProtKB:Q8C0J2, ECO:0000269|PubMed:18849966, ECO:0000269|PubMed:20637199, ECO:0000269|PubMed:22749352, ECO:0000269|PubMed:23376921, ECO:0000269|PubMed:23392225, ECO:0000269|PubMed:24238340, ECO:0000269|PubMed:24553140, ECO:0000269|PubMed:24954904, ECO:0000269|PubMed:25645662, ECO:0000269|PubMed:27273576, ECO:0000269|PubMed:29317426, ECO:0000269|PubMed:30778222, ECO:0000269|PubMed:33909989}.

Molecular Weight: 68.3 kDa

Target Details

UniProt: [Q676U5](#)

Pathways: [Autophagy](#)

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.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months