Datasheet for ABIN3137115

ATG7 Protein (AA 1-698) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	ATG7
Protein Characteristics:	AA 1-698
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATG7 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MGDPGLAKLQ FAPFNSALDV GFWHELTQKK LNEYRLDEAP KDIKGYYYNG DSAGLPTRLT LEFSAFDMSA STPAHCCPAM GTLHNTNTLE AFKTADKKLL LEQSANEIWE AIKSGAALEN PMLLNKFLLL TFADLKKYHF YYWFCCPALC LPESIPLIRG PVSLDQRLSP KQIQALEHAY DDLCRAEGVT ALPYFLFKYD DDTVLVSLLK HYSDFFQGQR TKITVGVYDP CNLAQYPGWP LRNFLVLAAH RWSGSFQSVE VLCFRDRTMQ GARDVTHSII FEVKLPEMAF SPDCPKAVGW EKNQKGGMGP RMVNLSGCMD PKRLAESSVD LNLKLMCWRL VPTLDLDKVV SVKCLLLGAG TLGCNVARTL MGWGVRHVTF VDNAKISYSN PVRQPLYEFE DCLGGGKPKA LAAAERLQKI FPGVNARGFN MSIPMPGHPV NFSDVTMEQA RRDVEQLEQL IDNHDVIFLL MDTRESRWLP TVIAASKRKL VINAALGFDT FVVMRHGLKK PKQQGAGDLC PSHLVAPADL GSSLFANIPG YKLGCYFCND VVAPGDSTRD RTLDQQCTVS RPGLAVIAGA LAVELMVSVL QHPEGGYAIA SSSDDRMNEP PTSLGLVPHQ IRGFLSRFDN VLPVSLAFDK CTACSPKVLD QYEREGFTFL

	AKVFNSSHSF LEDLTGLTLL HQETQAAEIW DMSDEETV **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®).

Product Details

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

Target Details

Target:	ATG7
Alternative Name:	Atg7 (ATG7 Products)
Background:	Ubiquitin-like modifier-activating enzyme ATG7 (ATG12-activating enzyme E1 ATG7) (Autophagy-related protein 7) (APG7-like) (mAGP7) (Ubiquitin-activating enzyme E1-like protein),FUNCTION: E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to vacuole transport (Cvt) and autophagy. Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine. Both systems are needed for the ATG8 association to Cvt vesicles and autophagosomes membranes. Facilitates LC3-I lipidation with phosphatidylethanolamine to form LC3-II which is found on autophagosomal membranes (By similarity). Required for autophagic death induced by caspase-8 inhibition. Required for mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production. Modulates p53/TP53 activity to regulate cell cycle and survival during metabolic stress. Also plays a key role in the maintenance of axonal homeostasis, the prevention of axonal degeneration, the maintenance of hematopoietic stem cells, the formation of Paneth cell granules, as well as in adipose differentiation. Plays a role in regulating the liver clock and glucose metabolism by mediating the autophagic degradation of CRY1 (clock repressor) in a time-dependent manner (PubMed:29937374). {ECO:0000250|UniProtKB:O95352, ECO:0000269|PubMed:11890701, ECO:0000269|PubMed:15131264, ECO:0000269|PubMed:15866887, ECO:0000269|PubMed:16704426, ECO:0000269|PubMed:17726112, ECO:0000269|PubMed:19417210, ECO:0000269|PubMed:19855132, ECO:0000269|PubMed:19910529, ECO:0000269|PubMed:20723759, ECO:0000269|PubMed:21339326, ECO:0000269|PubMed:21617129, ECO:0000269|PubMed:22291845, ECO:0000269|PubMed:22499945, ECO:0000269|PubMed:29937374}.
Molecular Weight:	77.5 kDa
UniProt:	Q9D906
Pathways:	Response to Water Deprivation, 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