Datasheet for ABIN7564998

ATG7 Protein (AA 1-698) (His tag)

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Overview

Quantity:	1 mg
Target:	ATG7
Protein Characteristics:	AA 1-698
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATG7 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Atg7 Protein expressed in mammalian cells.
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**

Product Details

	Purification-Tag is based on experiences 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.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, 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

Target Details

	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:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months