Datasheet for ABIN7552484

ATG3 Protein (AA 1-314) (His tag)

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Overview

Quantity:	1 mg
Target:	ATG3
Protein Characteristics:	AA 1-314
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATG3 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant ATG3 Protein expressed in mammalian cells.
Sequence:	MQNVINTVKG KALEVAEYLT PVLKESKFKE TGVITPEEFV AAGDHLVHHC PTWQWATGEE LKVKAYLPTG KQFLVTKNVP CYKRCKQMEY SDELEAIIEE DDGDGGWVDT YHNTGITGIT EAVKEITLEN KDNIRLQDCS ALCEEEEDED EGEAADMEEY EESGLLETDE ATLDTRKIVE ACKAKTDAGG EDAILQTRTY DLYITYDKYY QTPRLWLFGY DEQRQPLTVE HMYEDISQDH VKKTVTIENH PHLPPPPMCS VHPCRHAEVM KKIIETVAEG GGELGVHMYL LIFLKFVQAV IPTIEYDYTR HFTM **Sequence without tag. The proposed 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:

Product Details

	• 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:	ATG3
Alternative Name:	ATG3 (ATG3 Products)
Background:	Ubiquitin-like-conjugating enzyme ATG3 (EC 2.3.2.-) (Autophagy-related protein 3) (APG3-like) (hApg3) (Protein PC3-96),FUNCTION: E2 conjugating enzyme that catalyzes the covalent conjugation of the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A) to the amino group of phosphatidylethanolamine (PE)-containing lipids in the membrane resulting in membrane-bound ATG8-like proteins which is one of the key steps in the development of autophagic isolation membranes during autophagosome formation (PubMed:24191030, PubMed:37252361, PubMed:33446636). Cycles back and forth between binding to ATG7 for loading with the ATG8-like proteins and binding to E3 enzyme, composed of ATG12, ATG5 and ATG16L1 to promote ATG8-like proteins lipidation (PubMed:12207896, PubMed:24186333, PubMed:11825910, PubMed:12890687, PubMed:16704426). Also plays a role as a membrane curvature sensor that facilitates LC3/GABARAP lipidation by sensing local membrane stress associated with lipid-packing defects as occurs with high molar proportions of conical lipids or strident membrane curvature (By similarity). Interacts with negatively-charged membranes promoting membrane tethering and enhancing LC3/GABARAP lipidation

Target Details

	(PubMed:29142222). Also acts as an autocatalytic E2-like enzyme by catalyzing the conjugation of ATG12 to itself in an ATG7-dependent manner, this complex thus formed, plays a role in mitochondrial homeostasis but not in autophagy (By similarity). ATG12-ATG3 conjugation promotes late endosome to lysosome trafficking and basal autophagosome maturation via its interaction with PDCD6IP (By similarity). ATG12-ATG3 conjugate is also formed upon viccina virus infection, leading to the disruption the cellular autophagy which is not necessary for vaccinia survival and proliferation (By similarity). Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway (By similarity). {ECO:0000250|UniProtKB:Q9CPX6, ECO:0000269|PubMed:11825910, ECO:0000269|PubMed:12207896, ECO:0000269|PubMed:12890687, ECO:0000269|PubMed:16704426, ECO:0000269|PubMed:24186333, ECO:0000269|PubMed:24191030, ECO:0000269|PubMed:29142222, ECO:0000269|PubMed:33446636, ECO:0000269|PubMed:37252361}.
Molecular Weight:	35.9 kDa
UniProt:	Q9NT62
Pathways:	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

