ATG3 Antibody (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	ATG3, Blocking Peptide
Full Product Name	ATG3 Antibody (N-term) Blocking peptide
Product Gene Name	ATG3 blocking peptide
Product Synonym Gene Name	APG3; APG3L
Product Synonym Names	Ubiquitin-like-conjugating enzyme ATG3; 632-; Autophagy-related protein 3; APG3-like; hApg3; Protein PC3-96; ATG3; APG3; APG3L
Form/Format	The synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml deionized water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence used to generate the antibody was selected from the N-term region of human Autophagy APG3L. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	ATG3 peptide (MBS9223101) is used for blocking the activity of ATG3 antibody (MBS9203691)
Molecular Weight	35,467 Da
OMIM	609606
Cellular Location	Cytoplasm.
Tissue Location	Widely expressed, with a highest expression in heart, skeletal muscle, kidney, liver and placenta
Related Product Information for ATG3 blocking peptide	E2 conjugating enzyme required for the cytoplasm to vacuole transport (Cvt), autophagy, and mitochondrial homeostasis. Responsible for the E2-like covalent binding of phosphatidylethanolamine to the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A). The ATG12- ATG5 conjugate plays a role of an E3 and promotes the transfer of ATG8-like proteins from ATG3 to phosphatidylethanolamine (PE). This step is required for the membrane association of ATG8-like proteins. The formation of the ATG8-phosphatidylethanolamine conjugates is essential for autophagy and for the cytoplasm to vacuole transport (Cvt). Preferred substrate is MAP1LC3A. Also acts as an autocatalytic E2-like enzyme, catalyzing the conjugation of ATG12 to itself, ATG12 conjugation to ATG3 playing a role in mitochondrial homeostasis but not in autophagy. ATG7 (E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with ATG3. Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway.
Other Notes	Small volumes of ATG3 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ATG3 purchase	MBS9223101 is a blocking peptide targeting ATG3. Also known as ATG3 Antibody (N-term) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ATG3. It may not necessarily be applicable to this product.

NCBI GI #	61212142
NCBI GeneID	64422
NCBI Accession #	Q9NT62.1
UniProt Primary Accession #	Q9NT62

UniProt Secondary Accession #	Q6PKC5; Q9H6L9
UniProt Related Accession #	Q9NT62
NCBI Official Full Name	Ubiquitin-like-conjugating enzyme ATG3
NCBI Official Synonym Full Names	autophagy related 3
NCBI Official Symbol	ATG3
NCBI Official Synonym Symbols	APG3; APG3L; PC3-96; APG3-LIKE
UniProt Protein Name	Ubiquitin-like-conjugating enzyme ATG3
UniProt Synonym Protein Names	Autophagy-related protein 3; APG3-like; hApg3; Protein PC3-96
Protein Family	Autophagy-related protein
UniProt Gene Name	ATG3
UniProt Synonym Gene Names	APG3; APG3L; APG3-like; hApg3
UniProt Entry Name	ATG3_HUMAN
NCBI Protein Information	ubiquitin-like-conjugating enzyme ATG3
NCBI Summary for ATG3	This gene encodes a ubiquitin-like-conjugating enzyme and is a component of ubiquitination-like systems involved in autophagy, the process of degradation, turnover and recycling of cytoplasmic constituents in eukaryotic cells. This protein is known to play a role in regulation of autophagy during cell death. A pseudogene of this gene is located on chromosome 20. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2013]
UniProt Comments for ATG3	ATG3: an E2-like enzyme essential for Apg8p lipidation. Protein type: EC 6.3.2.-; Autophagy; Ubiquitin conjugating system; Enzyme, cellular metabolism Chromosomal Location of Human Ortholog: 3q13.2 Cellular Component: cytoplasmic ubiquitin ligase complex; cytosol Molecular Function: APG12 conjugating enzyme activity; APG8 conjugating enzyme activity; enzyme binding; protein binding; small conjugating protein ligase activity Biological Process: autophagic vacuole formation; macroautophagy; mitochondrial fragmentation during apoptosis; mitochondrion degradation; protein modification process; protein targeting to membrane; protein ubiquitination
Research Articles on ATG3	**1.** ATG3 upregulation contributes to autophagy induced by the detachment of intestinal epithelial cells from the extracellular matrix, but promotes autophagy-independent apoptosis of the attached cells
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