ATG4A Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ATG4A, Polyclonal Antibody
Full Product Name	ATG4A Rabbit pAb
Product Gene Name	anti-ATG4A antibody
Product Synonym Names	APG4A; AUTL2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	PBS with 0.02% Sodium Azide, 50% Glycerol, pH 7.3.
Purity/Purification	Affinity Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	46kDa
OMIM	300663
3D Structure	ModBase 3D Structure for Q8WYN0
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 289-398 of human ATG4A (NP_443168.2).
Cellular Localization	Cytoplasm
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-ATG4A antibody	Western Blot (WB)
Application Notes for anti-ATG4A antibody	WB: 1:500-1:2000
Related Product Information for anti-ATG4A antibody	Cysteine protease required for the cytoplasm to vacuole transport (Cvt) and autophagy. Cleaves the C-terminal amino acid of ATG8 family proteins to reveal a C-terminal glycine. Exposure of the glycine at the C-terminus is essential for ATG8 proteins conjugation to phosphatidylethanolamine (PE) and insertion to membranes, which is necessary for autophagy. Preferred substrate is GABARAPL2 followed by MAP1LC3A and GABARAP. Has also an activity of delipidating enzyme for the PE-conjugated forms.
Other Notes	Small volumes of anti-ATG4A antibody 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 ATG4A purchase	MBS8545019 is an antibody targeting ATG4A. Also known as ATG4A Rabbit pAb. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ATG4A. It may not necessarily be applicable to this product.

NCBI GI #	30795252

NCBI GeneID	115201
NCBI Accession #	NP_443168.2
UniProt Primary Accession #	Q8WYN0
UniProt Related Accession #	Q8WYN0
GenBank Nucleotide #	NP_443168.2
NCBI Official Full Name	cysteine protease ATG4A isoform a
NCBI Official Synonym Full Names	autophagy related 4A cysteine peptidase
NCBI Official Symbol	ATG4A
NCBI Official Synonym Symbols	APG4A; AUTL2
UniProt Protein Name	Cysteine protease ATG4A
UniProt Synonym Protein Names	AUT-like 2 cysteine endopeptidase; Autophagin-2; Autophagy-related cysteine endopeptidase 2; Autophagy-related protein 4 homolog A
Protein Family	Cysteine protease
UniProt Gene Name	ATG4A
UniProt Synonym Gene Names	APG4A; AUTL2; hAPG4A
UniProt Entry Name	ATG4A_HUMAN
NCBI Protein Information	cysteine protease ATG4A
NCBI Summary for ATG4A	Autophagy is the process by which endogenous proteins and damaged organelles are destroyed intracellularly. Autophagy is postulated to be essential for cell homeostasis and cell remodeling during differentiation, metamorphosis, non-apoptotic cell death, and aging. Reduced levels of autophagy have been described in some malignant tumors, and a role for autophagy in controlling the unregulated cell growth linked to cancer has been proposed. This gene encodes a member of the autophagin protein family. The encoded protein is also designated as a member of the C-54 family of cysteine proteases. [provided by RefSeq, Mar 2016]
UniProt Comments for ATG4A	ATG4A: Cysteine protease required for autophagy, which cleaves the C-terminal part of either MAP1LC3, GABARAPL2 or GABARAP, allowing the liberation of form I. A subpopulation of form I is subsequently converted to a smaller form (form II). Form II, with a revealed C-terminal glycine, is considered to be the phosphatidylethanolamine (PE)-conjugated form, and has the capacity for the binding to autophagosomes. Preferred substrate is GABARAPL2 followed by MAP1LC3A and GABARAP. Widely expressed, at a low level, and the highest expression is observed in skeletal muscle and brain. Also detected in fetal liver. Inhibited by N-ethylmaleimide. Belongs to the peptidase C54 family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.4.22.-; Microtubule-binding; Autophagy; Protease Chromosomal Location of Human Ortholog: Xq22.3 Cellular Component: cytoplasm; cytosol Molecular Function: cysteine-type endopeptidase activity; cysteine-type peptidase activity Biological Process: protein delipidation; mitochondrion degradation; C-terminal protein lipidation; protein processing; protein targeting to membrane; proteolysis; autophagic vacuole formation; cellular response to nitrogen starvation
Research Articles on ATG4A	**1.** An intron SNP rs807185 in ATG4A might be a protective factor for lung cancer.
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