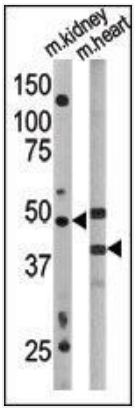
ATG4A Antibody – Rabbit Polyclonal

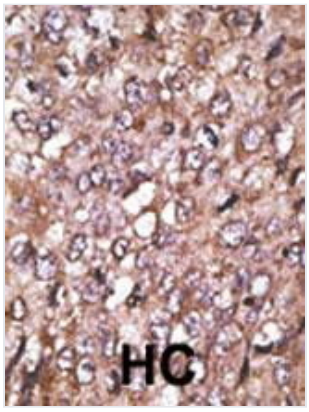
PRODUCT OVERVIEW

Product Name	ATG4A, Polyclonal Antibody
Full Product Name	ATG4A (ATG4A, APG4A, AUTL2, Cysteine protease ATG4A, AUT-like 2 cysteine endopeptidase, Autophagin-2, Autophagy-related cysteine endopeptidase 2, Autophagy-related protein 4 homolog A) (MaxLight 750)
Product Gene Name	anti-ATG4A antibody
Product Synonym Names	ATG4A; APG4A; AUTL2; Cysteine protease ATG4A; AUT-like 2 cysteine endopeptidase; Autophagin-2; Autophagy-related cysteine endopeptidase 2; Autophagy-related protein 4 homolog A
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by saturated ammonium sulfate precipitation followed by dialysis against PBS.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	45,378 Da
Chromosome Location	Chromosome: X; NC_000023.10 (107334899..107397901). Location: Xq22.1-q22.3
OMIM	300663
3D Structure	ModBase 3D Structure for Q8WYN0
Immunogen	ATG4A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 7~37 amino acids from the N-terminal region of human APG4A.
Conjugate	MaxLight750
Note	Preservative Free
Product Categories/Family for anti-ATG4A antibody	Antibodies; Enzymes; Protease (Proteinase; Peptidase)
Applications Tested/Suitable for anti-ATG4A antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-ATG4A antibody	IHC: 1:50-100 FLISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.

Related Product Information for anti-ATG4A antibody	Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). APG4A is a 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.
Product References and Citations for anti-ATG4A antibody	Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005). Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005). Greenberg JT. Dev Cell. 8(6):799-801. (2005). Levine B. Cell. 120(2):159-62. (2005). Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004).
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	MBS6276115 is an antibody targeting ATG4A. Also known as ATG4A (ATG4A, APG4A, AUTL2, Cysteine protease ATG4A, AUT-like 2 cysteine endopeptidase, Autophagin-2, Autophagy-related cysteine endopeptidase 2, Autophagy-related protein 4 homolog A) (MaxLight 750). Reactive in Human, Mouse. Host: Rabbit.



Western Blot (WB) of anti-ATG4A antibody
The anti-APG4A Pab is used in Western blot to detect APG4A in mouse kidney (left) and mouse heart (right) tissue lysates



Immunohistochemistry (IHC) of anti-ATG4A antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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 Secondary Accession #	O95534; Q5JYY9; Q5JYZ0; Q86VE5; Q96KQ0; Q96KQ1; A6NCH2; B2RAZ7; D3DUY0
UniProt Related Accession #	Q8WYN0
GenBank Nucleotide #	NM_052936.3
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; hAPG4A; autophagin 2; autophagin-2; APG4 autophagy 4 homolog A; AUT-like 2 cysteine endopeptidase; ATG4 autophagy related 4 homolog A; AUT-like 2, cysteine endopeptidase; autophagy-related protein 4 homolog A; autophagy-related cy
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. Transcript variants that encode distinct isoforms have been identified. [provided by RefSeq, Jul 2008]
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.** no association between SNP rs807185 and the presence of granulomas in Crohn's disease
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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