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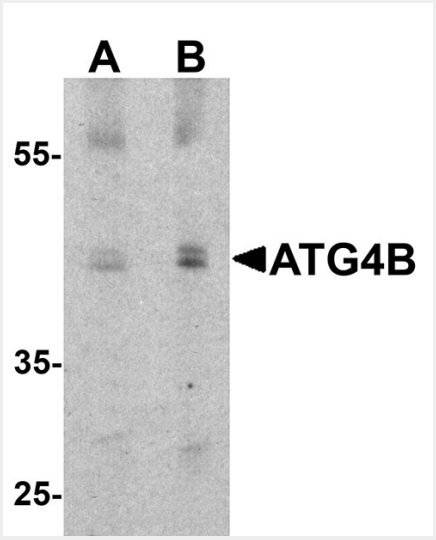
ATG4B Antibody
Catalog # ASC11884

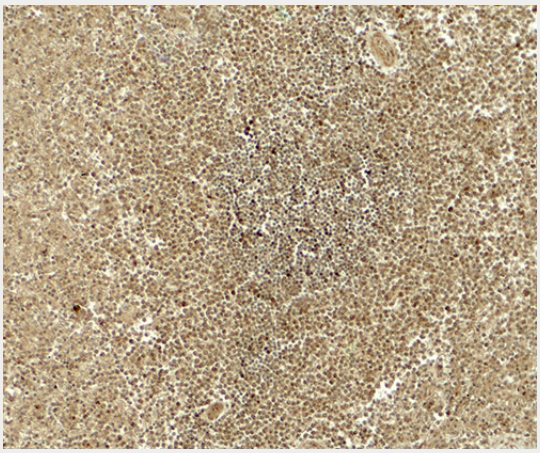
Specification

ATG4B Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9Y4P1
Other Accession	NP_037457, 47132611
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 43 kDa** **Observed: 44 kDa KDa**
Application Notes	**ATG4B antibody can be used for detection of ATG4B by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**



Western blot analysis of ATG4B in 3T3 cell lysate with ATG4B antibody at 1 µg/ml.



Immunohistochemistry of ATG4B in human spleen tissue with ATG4B antibody at 5 µg/ml.

ATG4B Antibody - Additional Information

Gene ID **23192**

Target/Specificity
ATG4B; ATG4B antibody is human, mouse and rat reactive. At least two isoforms of ATG4B are known to exist; this antibody will detect only the larger isoform. ATG4B is predicted to not cross-react with other ATG4 proteins.

Reconstitution & Storage
ATG4B antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
ATG4B Antibody is for research use only and not for use in diagnostic or therapeutic

procedures.

ATG4B Antibody - Protein Information

Name ATG4B

Synonyms APG4B, AUTL1, KIAA0943

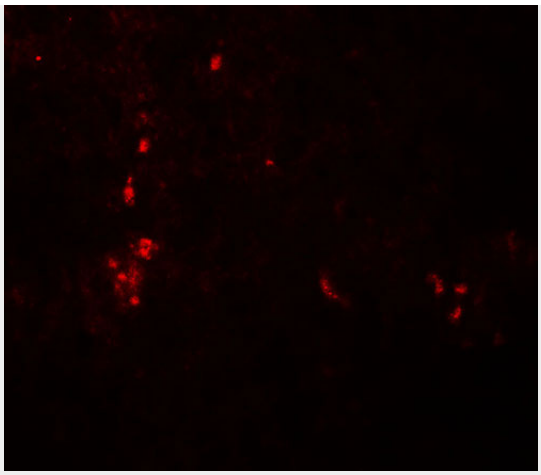
Function
Cysteine protease required for the cytoplasm to vacuole transport (Cvt) and autophagy. Cleaves the C-terminal amino acid of ATG8 family proteins MAP1LC3, GABARAPL1, GABARAPL2 and GABARAP, to reveal a C-terminal glycine. Exposure of the glycine at the C-terminus is essential for ATG8 proteins conjugation to phosphatidylethanolamine (PE) and insertion to membranes, which is necessary for autophagy. Has also an activity of delipidating enzyme for the PE-conjugated forms.

Cellular Location
Cytoplasm.

ATG4B Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture



Immunofluorescence of ATG4B in human spleen tissue with ATG4B antibody at 20 µg/ml.

ATG4B Antibody - Background

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components (1,2). ATG4B, also known as AUTL1, is one of four mammalian orthologs of the yeast ATG4 protein; all four are cysteine proteases (3). ATG4 is required for ATG8 conjugation to phosphatidylethanolamine on autophagosomal membranes. In mammals, each ATG4 homolog shows a selective preference for the ATG8 homologs (4). ATG4B has been found to be a novel protective protein in inflammatory colitis (5).

ATG4B Antibody - References

Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. Oncogene 2004; 23:2891-906.
Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis 1993; 14:2501-5.
Marino G, Uria JA, Puente XS, et al. Human autophagins, a family of cysteine proteinases potentially implicated in cell degradation by autophagy. J. Biol. Chem. 2003; 278:3671-8.

Li M, Hou Y, Wang J, et al. Kinetic comparisons of mammalian Atg4 homologues indicate selective preferences towards diverse Atg8 substrates. J. Biol. Chem. 2011; 286:7327-38.