

ATG4A Antibody

Catalog # ASC11883

Specification

ATG4A Antibody - Product Information

Application **WB, IHC**
Primary Accession [Q8WYN0](#)
Other Accession [NP_443168](#),
[30795252](#)
Reactivity **Human, Mouse, Rat**
Host **Rabbit**
Clonality **Polyclonal**
Isotype **IgG**
Calculated MW **Predicted: 48 kDa**

Observed: 44 kDa
KDa
Application Notes **ATG4A antibody can be used for detection of ATG4A by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL.**

ATG4A Antibody - Additional Information

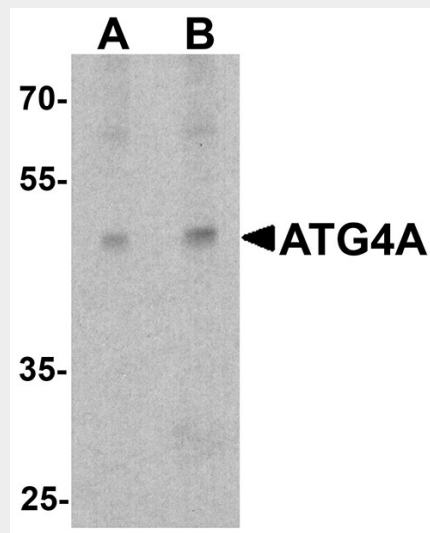
Gene ID **115201**
Target/Specificity
ATG4A; ATG4A antibody is human, mouse and rat reactive. At least two isoforms of ATG4A are known to exist; this antibody will detect both isoforms. ATG4A is predicted to not cross-react with other ATG4 proteins.

Reconstitution & Storage

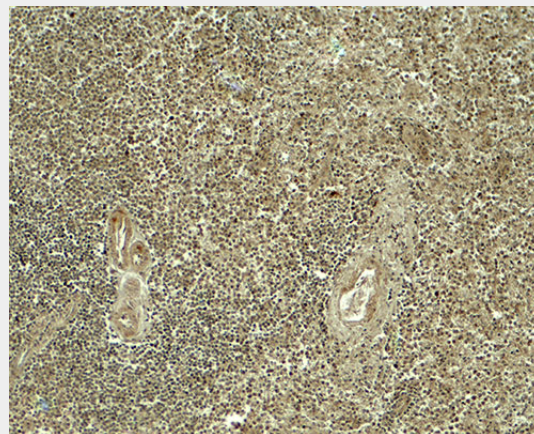
ATG4A antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

ATG4A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.



Western blot analysis of ATG4A in EL4 cell lysate with ATG4A antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of ATG4A in human spleen tissue with ATG4A antibody at 5 µg/ml.

ATG4A 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

ATG4A Antibody - Protein Information**Name** ATG4A**Synonyms** APG4A, AUTL2**Function**

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.

Cellular Location

Cytoplasm.

ATG4A 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 Cytometry](#)
- [Cell Culture](#)

preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components (1,2). ATG4A, also known as AUTL2, 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).

ATG4A 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.