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ATG101 Antibody
Catalog # ASC11146

Specification

ATG101 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9BSB4
Other Accession	NP_001092143, 149158714
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**ATG101 antibody can be used for detection of ATG101 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.**

ATG101 Antibody - Additional Information

Gene ID	**60673**

Target/Specificity
C12orf44;

Reconstitution & Storage
ATG101 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
ATG101 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATG101 Antibody - Protein Information

Name ATG101

Synonyms C12orf44

Function
Autophagy factor required for autophagosome formation. Stabilizes ATG13, protecting it from proteasomal degradation.

Cellular Location
Cytoplasm. Preautophagosomal structure. Note=Under starvation conditions, it is localized to puncate structures primarily representing the isolation membrane; the isolation membrane sequesters a portion of the cytoplasm resulting in autophagosome formation

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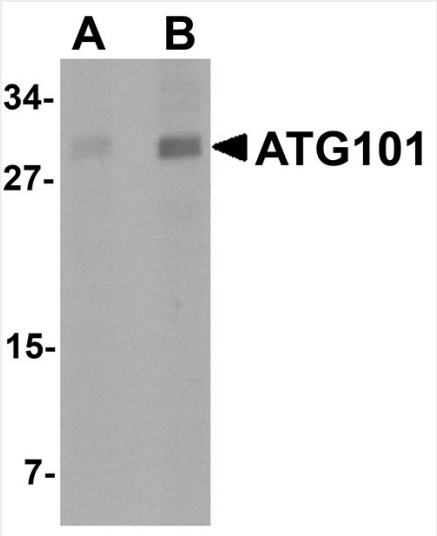
ATG101 Antibody - Protocols

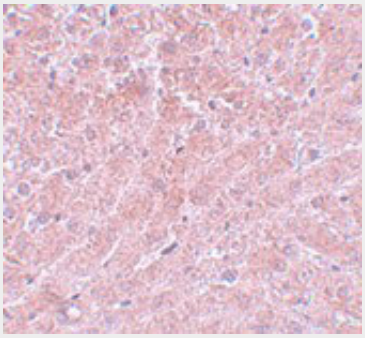
Provided below are standard protocols that you may find useful for product applications.

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

ATG101 Antibody - Images



Western blot analysis of ATG101 in human liver tissue lysate with ATG101 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of ATG101 in mouse liver with ATG101 antibody at 5 µg/mL.

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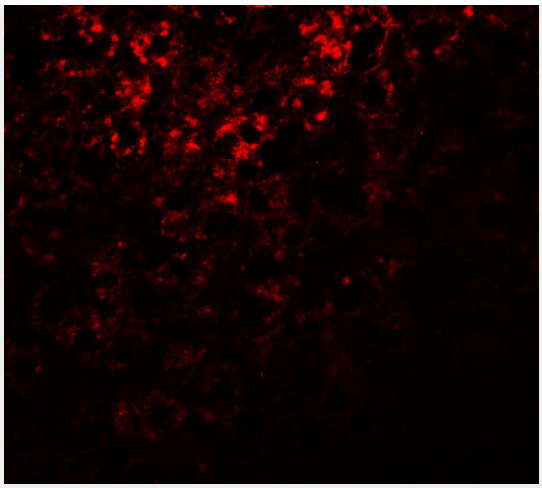

Immunofluorescence of ATG101 in mouse liver tissue with ATG101 antibody at 20 µg/mL.

ATG101 Antibody - Background

ATG101 Antibody: 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. This process is negatively regulated by TOR (Target of rapamycin) through phosphorylation of autophagy protein ATG1. ATG101 is a recently discovered protein that stabilizes ATG13, another autophagy protein that forms a complex with the mammalian homologs of ATG1, ULK1 and ULK2, and with FIP200. This complex is a target of TOR phosphorylation under normal conditions; inhibition of TOR by rapamycin or leucine deprivation leads to dephosphorylation of ATG13, ULK1 and ULK2, which then leads to autophagy. ATG101 also interacts with ULK1 and is essential for autophagy.

ATG101 Antibody - References

Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. Oncogene2004; 23:2891-906.
Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis1993; 14:2501-5.
Kamada Y, Funakoshi T, Shintani T, et al. Tor-mediated induction of autophagy via Apg1 protein kinase complex. J. Cell. Biol.2000; 150:1507-13.
Mercar CA, Kaliappan A, and Dennis PB. A novel, human Atg13 binding protein, Atg101, interacts with ULK1 and is essential for macroautophagy. Autophagy2009; 5:649-62.