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ATG9A Antibody
Catalog # ASC11218

Specification

ATG9A Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q7Z3C6
Other Accession	NP_076990, 116089287
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**ATG9A antibody can be used for detection of ATG9A by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

ATG9A Antibody - Additional Information

Gene ID	**79065**

Target/Specificity
ATG9A;

Reconstitution & Storage
ATG9A 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
ATG9A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATG9A Antibody - Protein Information

Name ATG9A {ECO:0000303|PubMed:20124090, ECO:0000312|HGNC:HGNC:22408}

Function
Phospholipid scramblase involved in autophagy by mediating autophagosomal membrane expansion (PubMed:22456507, PubMed:27510922, PubMed:29437695, PubMed:32513819, PubMed:32610138, PubMed:33106659, PubMed:33468622, PubMed:33850023). Cycles between the preautophagosomal structure/phagophore assembly site (PAS) and the cytoplasmic vesicle pool and supplies membrane for the growing

autophagosome (PubMed:16940348, PubMed:22456507, PubMed:33106659). Lipid scramblase activity plays a key role in preautophagosomal structure/phagophore assembly by distributing the phospholipids that arrive through ATG2 (ATG2A or ATG2B) from the cytoplasmic to the luminal leaflet of the bilayer, thereby driving autophagosomal membrane expansion (PubMed:33106659). Also required to supply phosphatidylinositol 4- phosphate to the autophagosome initiation site by recruiting the phosphatidylinositol 4-kinase beta (PI4KB) in a process dependent on ARFIP2, but not ARFIP1 (PubMed:30917996). In addition to autophagy, also plays a role in necrotic cell death (By similarity).

Cellular Location
Preautophagosomal structure membrane; Multi-pass membrane protein. Cytoplasmic vesicle, autophagosome membrane; Multi- pass membrane protein. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein. Recycling endosome membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Note=Mainly localizes to the trans-Golgi network (TGN) and the endosomal system; cycles between them though vesicle trafficking (PubMed:27316455, PubMed:27663665). Export from the TGN to promote formation of autophagosomes is mediated by the AP-4 complex (PubMed:29180427, PubMed:30262884). Under amino acid starvation or rapamycin treatment, redistributes to preautophagosomal structure/phagophore assembly site (PAS) (PubMed:16940348). The starvation-induced redistribution depends on ULK1, ATG13, as well as SH3GLB1 (PubMed:16940348). Upon autophagy induction, a small portion transiently localizes to the autophagic membranes (PubMed:22456507) Recruited to damaged mitochondria during mitophagy in a RIMOC1- dependent manner (PubMed:34432599).

ATG9A 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

ATG9A Antibody - Images

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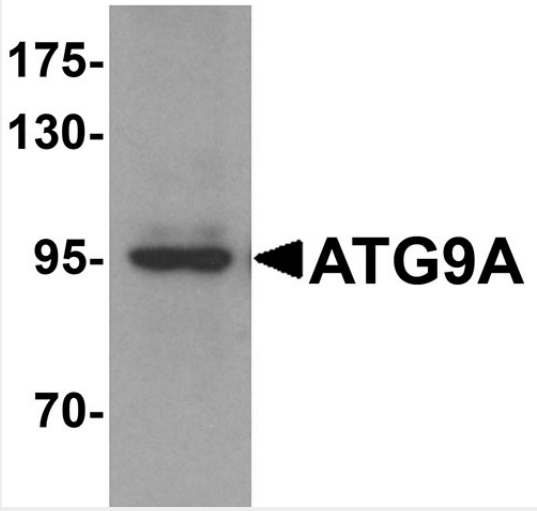
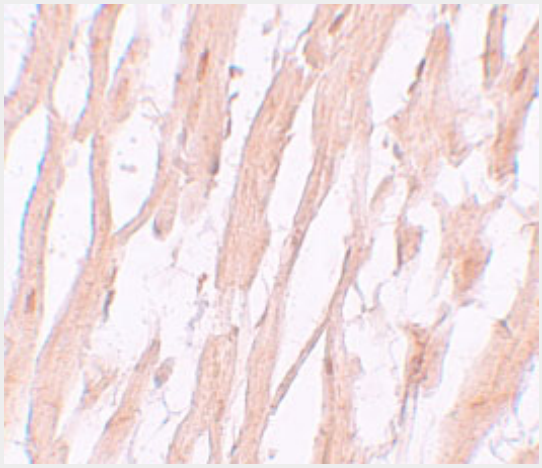
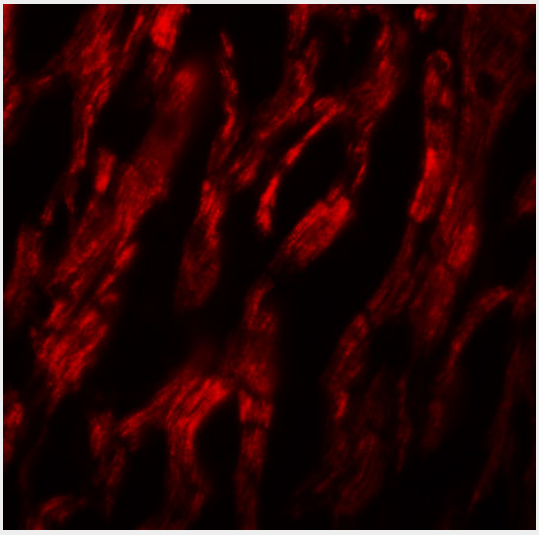


Western blot analysis of ATG9A in mouse heart tissue lysate with ATG9A antibody at 1 µg/mL.



Immunohistochemistry of ATG9A in human heart tissue with ATG9A antibody at 5 µg/mL.



Immunofluorescence of ATG9A in human heart tissue with ATG9A antibody at 20 µg/mL.

ATG9A Antibody - Background

ATG9A 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 APG1. ATG9A, a multi-spanning membrane protein localizing to the Golgi apparatus and late endosomes, has been proposed to mediate membrane transport to generate autophagosomes. ATG9A has also been implicated as a regulator of STING (stimulator of interferon genes)-mediated innate immune response.

ATG9A 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.
Webber JL, Young AR, and Tooze SA. Atg9 trafficking in mammalian cells. Autophagy2007; 3:54-6.