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ATG2B Antibody
Catalog # ASC11534

Specification

ATG2B Antibody - Product Information

Application	**WB, IF, E**
Primary Accession	Q96BY7
Other Accession	NP_060506, 118197272
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**229 kDa KDa**
Application Notes	**ATG2B antibody can be used for detection of ATG2B by Western blot at 1 - 2 µg/mL. For immunofluorescence start at 20 µg/mL.**

ATG2B Antibody - Additional Information

Gene ID **55102**

Target/Specificity
ATG2B; ATG2B antibody is predicted to not cross-react with other ATG2A.

Reconstitution & Storage
ATG2B 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
ATG2B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATG2B Antibody - Protein Information

Name ATG2B {ECO:0000303|PubMed:22219374, ECO:0000312|HGNC:HGNC:20187}

Function
Lipid transfer protein required for both autophagosome formation and regulation of lipid droplet morphology and dispersion (PubMed:22219374, PubMed:31721365). Tethers the edge of the isolation membrane (IM) to the endoplasmic reticulum (ER) and mediates direct lipid transfer from ER to IM for IM expansion (PubMed:22219374, PubMed:31721365). Binds to the ER exit site (ERES), which is the membrane source for autophagosome formation, and extracts phospholipids from the membrane source and transfers them to ATG9 (ATG9A or ATG9B) to the IM for membrane expansion (By similarity). Lipid transfer activity is enhanced by WDR45/WIPI4, which promotes ATG2B-association with phosphatidylinositol 3-monophosphate (PI3P)-containing membranes (PubMed:<a href="http://www.uniprot.org/citations/31721365"

target="_blank">31721365).

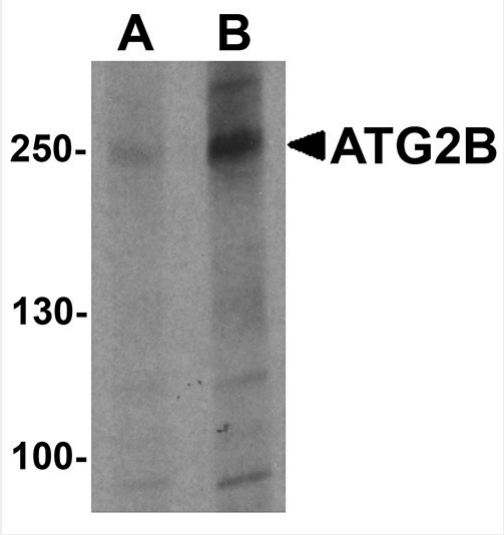
Cellular Location
Preautophagosomal structure membrane; Peripheral membrane protein. Lipid droplet. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P53855}; Peripheral membrane protein {ECO:0000250|UniProtKB:P53855}

ATG2B Antibody - Protocols

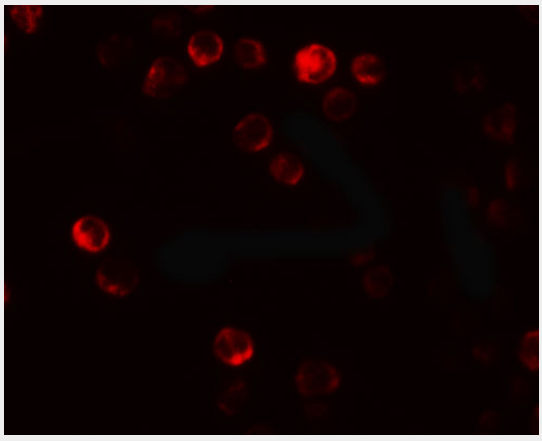
Provided below are standard protocols that you may find useful for product applications.

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

ATG2B Antibody - Images



Western blot analysis of ATG2B in K562 cell lysate with ATG2B antibody at (A) 1 and (B) 2 µg/ml



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Immunofluorescence of ATG2B in K562 cells with ATG2B antibody at 20 µg/mL.

ATG2B Antibody - Background

ATG2B 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. Another member of the autophagy family of proteins is ATG2B, one of two homologs of ATG2 that is essential for autophagosome formation and important for regulation of size and distribution of lipid droplets. Relatively high rates of ATG2B mutations were observed in gastric and colorectal carcinomas, suggesting that deregulating the autophagy process may contribute to cancer development.

ATG2B 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.
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.
Velikkakath AK, Nishimura T, Oita E, et al. Mammalian Atg2 proteins are essential for autophagosome formation and important for regulation of size and distribution of lipid droplets. Mol. Biol. Cell 2012; 23:896-909.