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ATG2B Antibody

Catalog # ASC11534

Product Information

Application	WB, IF, E
Primary Accession	Q96BY7
Other Accession	NP_060506, 118197272
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	232763
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ATG2B antibody can be used for detection of ATG2B by Western blot at 1 - 2 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	55102
Other Names	Autophagy-related protein 2 homolog B, ATG2B, C14orf103
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.

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: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}

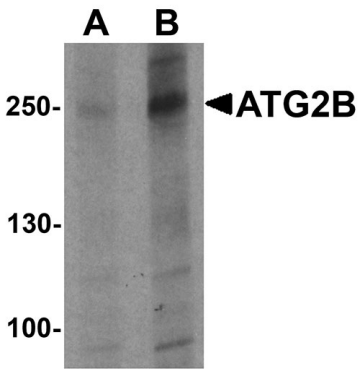
Background

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.

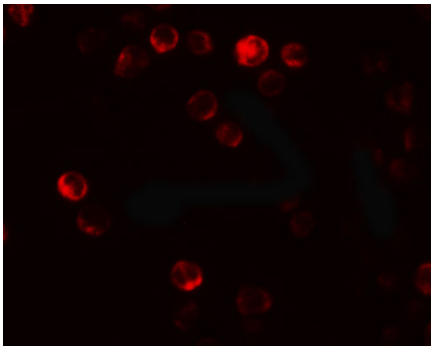
References

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.

Images



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



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.