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Mouse Monoclonal Antibody to ATG2A

Purified Mouse Monoclonal Antibody
Catalog # AO2496a

Product Information

Application	WB, FC, ICC, E
Primary Accession	Q2TAZ0
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4E6D4
Isotype	Mouse IgG1
Calculated MW	212860
Description	ATG2A (Autophagy Related 2A) is a Protein Coding gene. An important paralog of this gene is ATG2B.;
Immunogen	Purified recombinant fragment of human ATG2A (AA: 325-429) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; ICC: 1/50- 1/200; FCM: 1/200 - 1/400

Additional Information

Gene ID	23130
Other Names	Autophagy-related protein 2 homolog A, ATG2A, KIAA0404
Dilution	WB~~1:1000 FC~~1:10~50 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to ATG2A is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATG2A {ECO:0000303|PubMed:21887408, ECO:0000312|HGNC:HGNC:29028}
Function	Lipid transfer protein involved in autophagosome assembly (PubMed:28561066, PubMed:30952800, PubMed:31271352). 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:30952800, PubMed:31271352). 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 (PubMed:30952800, PubMed:31271352). Lipid transfer activity is enhanced by WIPI1 and WDR45/WIPI4, which promote ATG2A-association with phosphatidylinositol 3-monophosphate (PI3P)-containing membranes (PubMed:31271352). Also regulates lipid droplets morphology and distribution within the cell (PubMed:22219374, PubMed:28561066).

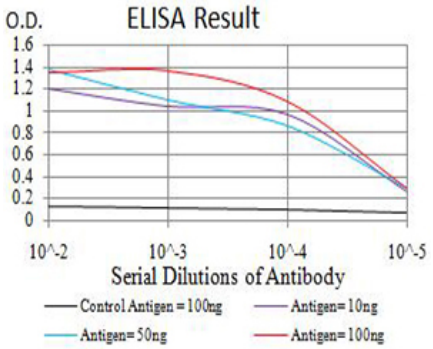
Cellular Location

Preautophagosomal structure membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q96BY7}. Lipid droplet {ECO:0000250|UniProtKB:Q96BY7}. Endoplasmic reticulum membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:P53855}. Note=Localizes to endoplasmic reticulum-autophagosome contact sites.

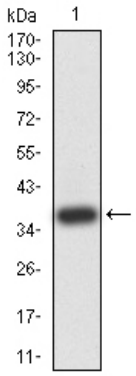
References

1.Mol Biol Cell. 2012 Mar;23(5):896-909. ; 2.Acta Biochim Pol. 2011;58(3):365-74.;

Images

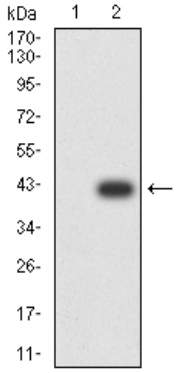


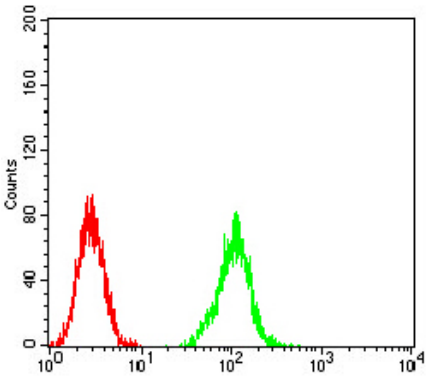
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



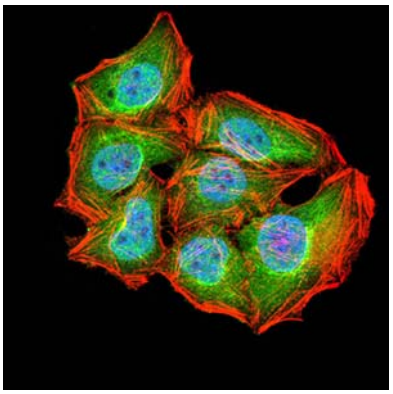
Western blot analysis using ATG2A mAb against human ATG2A (AA: 325-429) recombinant protein. (Expected MW is 37.2 kDa)

Western blot analysis using ATG2A mAb against HEK293 (1) and ATG2A (AA: 325-429)-hIgGFc transfected HEK293 (2) cell lysate.





Flow cytometric analysis of K562 cells using ATG2A mouse mAb (green) and negative control (red).



Immunofluorescence analysis of Hela cells using ATG2A mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Secondary antibody from Fisher

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