10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

WIPI2 Antibody
Catalog # ASC11577

Specification

WIPI2 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q9Y4P8
Other Accession	NP_056425, 7661580
Reactivity	**Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**50 kDa KDa**
Application Notes	**WIPI2 antibody can be used for detection of WIPI2 by Western blot at 1 - 2 µg/mL.**

WIPI2 Antibody - Additional Information

Gene ID **26100**

Target/Specificity
WIPI2; WIPI2 antibody is human and rat reactive. Multiple isoforms of WIPI2 are known to exist. WIPI2 antibody is predicted to not cross-react with WIPI1.

Reconstitution & Storage
WIPI2 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
WIPI2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

WIPI2 Antibody - Protein Information

Name WIPI2 (HGNC:32225)

Function
Component of the autophagy machinery that controls the major intracellular degradation process by which cytoplasmic materials are packaged into autophagosomes and delivered to lysosomes for degradation (PubMed:20505359, PubMed:28561066). Involved in an early step of the formation of preautophagosomal structures (PubMed:20505359, PubMed:28561066). Binds and is activated by phosphatidylinositol 3- phosphate (PtdIns3P) forming on membranes of the endoplasmic reticulum upon activation of the upstream ULK1 and PI3 kinases (PubMed:28561066). Mediates ER-isolation membranes contacts by interacting with the ULK1:RB1CC1 complex and PtdIns3P (PubMed:<a

href="http://www.uniprot.org/citations/28890335" target="_blank">28890335). Once activated, WIPI2 recruits at phagophore assembly sites the ATG12-ATG5-ATG16L1 complex that directly controls the elongation of the nascent autophagosomal membrane (PubMed:20505359, PubMed:28561066).

Cellular Location
Preautophagosomal structure membrane; Peripheral membrane protein; Cytoplasmic side. Note=Localizes to omegasomes membranes which are endoplasmic reticulum connected structures at the origin of preautophagosomal structures. Enriched at preautophagosomal structure membranes in response to PtdIns3P.

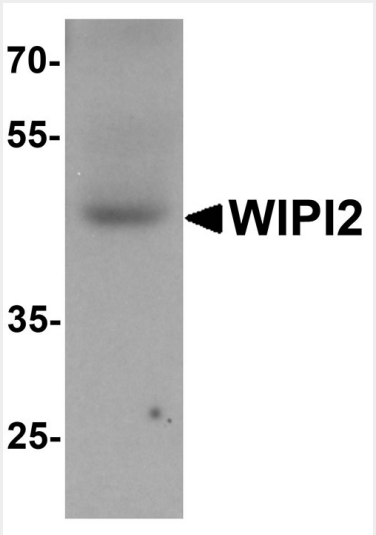
Tissue Location
Ubiquitously expressed (at protein level). Highly expressed in heart, skeletal muscle and pancreas. Expression is down- regulated in pancreatic and in kidney tumors

WIPI2 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

WIPI2 Antibody - Images



Western blot analysis of WIPI2 in human testis tissue lysate with WIPI2 antibody at 1 µg/mL

WIPI2 Antibody - Background

WIPI2 Antibody: WD repeat proteins play a role in many essential biologic functions, regulating the assembly of multiprotein complexes by presenting a beta-propeller platform for simultaneous and

reversible protein-protein interactions. WIPI2, also known as ATG18B or ATG21, is a human homolog to yeast ATG18 and contains three WD repeats and has a 7-bladed propeller structure with a conserved motif that facilitates its interaction with other proteins. It is recruited to early autophagosomal structures along with Atg16L and ULK1 and is required for the formation of LC3-positive autophagosomes. Along with the highly related WIPI1, WIPI2 is found at the plasma membrane in addition to autophagosomal membranes.

WIPI2 Antibody - References

Smith TF. Diversity of WD-repeat proteins. Subcell. Biochem. 2008; 48:20-30.
Polson HE, de Lartique J, Rigden DJ, et al. Mammalian ATG18 (WIPI2) localizes to moegasome-anchored phagophores and positively regulates LC3 lipidation. Autophagy 2010; 6:506-22.
Proikas-Cezanne T and Robenek H. Freeze-fracture replica immunolabelling reveals human WIPI-1 and WIPI-2 as membrane proteins of autophagosomes. J. Cell. Mol. Med. 2011; 15:2007-10.