

**WIPI2 Antibody**  
Catalog # ASC11577**Specification****WIPI2 Antibody - Product Information**

Application	<b>WB, E</b>
Primary Accession	<a href="#">O9Y4P8</a>
Other Accession	<a href="#">NP_056425</a> , <a href="#">7661580</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>IgG</b>
Calculated MW	<b>50 kDa KDa</b>
Application Notes	<b>WIPI2 antibody can be used for detection of WIPI2 by Western blot at 1 - 2 µg/mL.</b>

**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°C for three months and -20°C, 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: <http://www.uniprot.org/citations/20505359> target="\_blank">20505359</a>, PubMed: <http://www.uniprot.org/citations/28561066> target="\_blank">28561066</a>). Involved in an early step of the formation of preautophagosomal structures (PubMed: <http://www.uniprot.org/citations/20505359> target="\_blank">20505359</a>, PubMed: <http://www.uniprot.org/citations/28561066> target="\_blank">28561066</a>). 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: <http://www.uniprot.org/citations/28561066> target="\_blank">28561066</a>). 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</a>). Once activated, WIPI2 recruits at phagophore assembly sites the ATG12-ATG5-ATG16L1 complex that directly controls the elongation of the nascent autophagosomal membrane (PubMed:<a href="http://www.uniprot.org/citations/20505359" target="\_blank">20505359</a>, PubMed:<a href="http://www.uniprot.org/citations/28561066" target="\_blank">28561066</a>).

#### 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

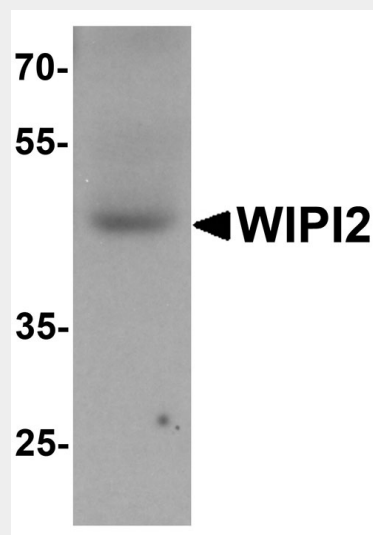
Ubiquitously expressed (at protein level). Highly expressed in heart, skeletal muscle and pancreas. Expression is down- regulated in pancreatic and in kidney tumors

### 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 Cytometry](#)
- [Cell Culture](#)

### WIPI2 Antibody - Images



Western blot analysis of WIPI2 in human testis tissue lysate with WIPI2 antibody at 1  $\mu$ g/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.