

ATG18 / WIPI1 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS15663**Specification**

ATG18 / WIPI1 Antibody (C-Terminus) - Product Information

Application	IHC, IF, WB
Primary Accession	Q5MNZ9
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49kDa KDa

ATG18 / WIPI1 Antibody (C-Terminus) - Additional Information**Gene ID** 55062**Other Names**

WD repeat domain phosphoinositide-interacting protein 1, WIPI-1, Atg18 protein homolog, WD40 repeat protein interacting with phosphoinositides of 49 kDa, WIPI 49 kDa, WIPI1, WIPI49

Target/Specificity

Human WIPI1. At least two isoforms of WIPI1 are known to exist; this antibody will detect both isoforms.

Reconstitution & Storage

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions

ATG18 / WIPI1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

ATG18 / WIPI1 Antibody (C-Terminus) - Protein Information**Name** WIPI1**Synonyms** WIPI49**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: [15602573](http://www.uniprot.org/citations/15602573), PubMed: [20114074](http://www.uniprot.org/citations/20114074), PubMed: [20484055](http://www.uniprot.org/citations/20484055), PubMed: [20639694](http://www.uniprot.org/citations/20639694), PubMed: [23088497](http://www.uniprot.org/citations/23088497), PubMed: [28561066](http://www.uniprot.org/citations/28561066), PubMed: [31271352](http://www.uniprot.org/citations/31271352))

target="_blank">31271352). Plays an important role in starvation- and calcium-mediated autophagy, as well as in mitophagy (PubMed:28561066). Functions downstream of the ULK1 and PI3- kinases that produce phosphatidylinositol 3-phosphate (PtdIns3P) on membranes of the endoplasmic reticulum once activated (PubMed:28561066). Binds phosphatidylinositol 3-phosphate (PtdIns3P), and maybe other phosphoinositides including PtdIns3,5P2 and PtdIns5P, and is recruited to phagophore assembly sites at the endoplasmic reticulum membranes (PubMed:28561066, PubMed:31271352, PubMed:33499712). There, it assists WIPI2 in the recruitment of ATG12- ATG5-ATG16L1, a complex that directly controls the elongation of the nascent autophagosomal membrane (PubMed:28561066). Together with WDR45/WIPI4, promotes ATG2 (ATG2A or ATG2B)-mediated lipid transfer by enhancing ATG2-association with phosphatidylinositol 3-monophosphate (PI3P)-containing membranes (PubMed:31271352). Involved in xenophagy of *Staphylococcus aureus* (PubMed:22829830). Invading *S.aureus* cells become entrapped in autophagosome-like WIPI1 positive vesicles targeted for lysosomal degradation (PubMed:22829830). Also plays a distinct role in controlling the transcription of melanogenic enzymes and melanosome maturation, a process that is distinct from starvation-induced autophagy (PubMed:21317285). May also regulate the trafficking of proteins involved in the mannose-6-phosphate receptor (MPR) recycling pathway (PubMed:15020712).

Cellular Location

Golgi apparatus, trans-Golgi network. Endosome. Cytoplasmic vesicle, clathrin-coated vesicle. Preautophagosomal structure membrane; Peripheral membrane protein. Cytoplasm, cytoskeleton. Note=Trans elements of the Golgi and peripheral endosomes. Dynamically cycles through these compartments and is susceptible to conditions that modulate membrane flux. Enriched in clathrin-coated vesicles. Upon starvation-induced autophagy, accumulates at subcellular structures in the cytoplasm: enlarged vesicular and lasso-like structures, and large cup-shaped structures predominantly around the nucleus. Recruitment to autophagic membranes is controlled by MTMR14. Labile microtubules specifically recruit markers of autophagosome formation like WIPI1, whereas mature autophagosomes may bind to stable microtubules

Tissue Location

Ubiquitously expressed. Highly expressed in skeletal muscle, heart, testis, pancreas and placenta. Highly expressed in G361, Sk-mel-28, Sk-mel-13, WM852 and WM451 cells. Up-regulated in a variety of tumor tissues.

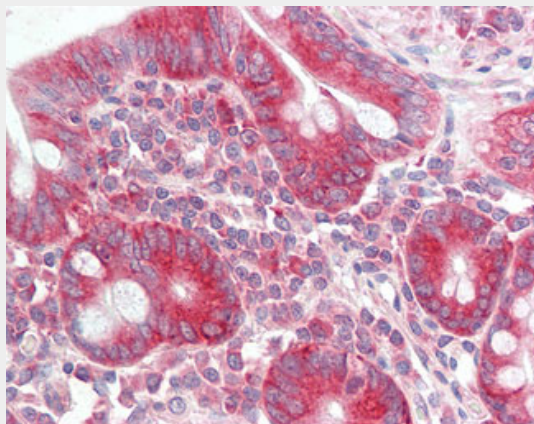
ATG18 / WIPI1 Antibody (C-Terminus) - Protocols

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

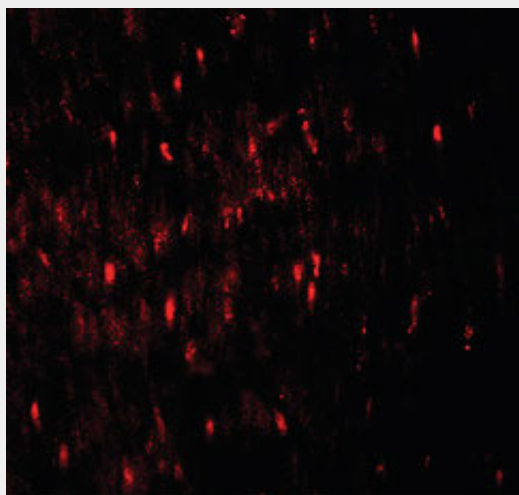
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

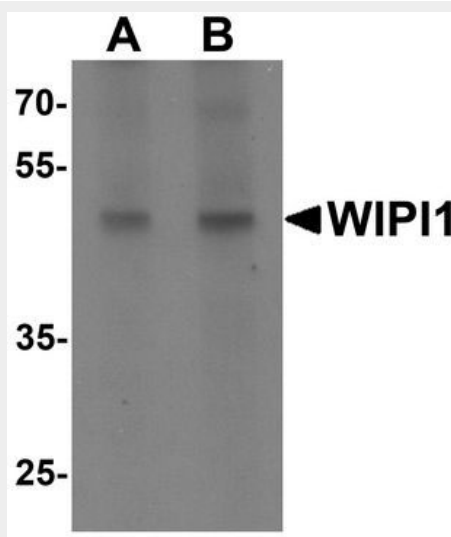
ATG18 / WIPI1 Antibody (C-Terminus) - Images



Anti-ATG18 / WIPI1 antibody IHC staining of human small intestine.



Immunofluorescence of WIPI1 in human colon tissue with WIPI1 antibody at 20 ug/ml.



Western blot analysis of WIPI1 in rat colon tissue lysate with WIPI1 antibody at (A) 1 and (B) 2...

ATG18 / WIPI1 Antibody (C-Terminus) - Background

Plays an important role in autophagy and in particular starvation- and calcium-mediated autophagy, as well as in mitophagy. Functions upstream of the ATG12-ATG5-ATG16L1 complex and LC3, and downstream of the ULK1 and PI3-kinase complexes. Involved in xenophagy of *Staphylococcus aureus*. Invading *S.aureus* cells become entrapped in autophagosome-like WIPI1 positive vesicles targeted for lysosomal degradation. Plays also a distinct role in controlling the transcription of melanogenic enzymes and melanosome maturation, a process that is distinct from starvation- induced autophagy. May also regulate the trafficking of proteins involved in the mannose-6-phosphate receptor (MPR) recycling pathway.

ATG18 / WIPI1 Antibody (C-Terminus) - References

Proikas-Cezanne T.,et al.Oncogene 23:9314-9325(2004).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Zody M.C.,et al.Nature 440:1045-1049(2006).
Jeffries T.R.,et al.Mol. Biol. Cell 15:2652-2663(2004).
Proikas-Cezanne T.,et al.FEBS Lett. 581:3396-3404(2007).