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WIPI1 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20115a

Specification

WIPI1 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q5MNZ9
Other Accession	Q8R3E3, NP_060453
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**48673**
Antigen Region	**32-59**

WIPI1 Antibody (N-term) - 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
This WIPI1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 32-59 amino acids from the N-terminal region of human WIPI1.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
WIPI1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

WIPI1 Antibody (N-term) - 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, PubMed:20114074, PubMed:20484055, PubMed:20639694, PubMed:23088497, PubMed:28561066, PubMed: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.

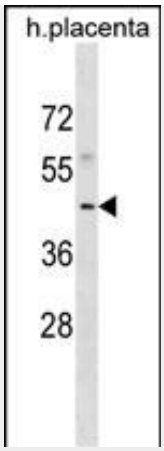
WIPI1 Antibody (N-term) - Protocols

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

WIPI1 Antibody (N-term) - Images

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WIPI1 Antibody (N-term) (Cat. #AP20115a) western blot analysis in human placenta tissue lysates (35ug/lane).This demonstrates the WIPI1 antibody detected the WIPI1 protein (arrow).

WIPI1 Antibody (N-term) - Background

WD40 repeat proteins are key components of many essential biologic functions. They regulate the assembly of multiprotein complexes by presenting a beta-propeller platform for simultaneous and reversible protein-protein interactions. Members of the WIPI subfamily of WD40 repeat proteins, such as WIPI1, have a 7-bladed propeller structure and contain a conserved motif for interaction with phospholipids (Proikas-Cezanne et al., 2004 [PubMed 15602573]).

WIPI1 Antibody (N-term) - References

Chasman, D.I., et al. PLoS Genet. 5 (11), E1000730 (2009) :
Proikas-Cezanne, T., et al. FEBS Lett. 581(18):3396-3404(2007)
Proikas-Cezanne, T., et al. Oncogene 23(58):9314-9325(2004)
Jeffries, T.R., et al. Mol. Biol. Cell 15(6):2652-2663(2004)