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ATG18 Recombinant Rabbit mAb

Catalog # AP100026

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q5MNZ9
Other Accession	Q5MNZ9
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	48673
Physical State	Liquid
Immunogen	A synthesized peptide derived from human WIPI 1
Epitope Specificity	55-102
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the WD repeat SVP1 family. Contains 7 WD repeats.
SUBUNIT	Interacts with androgen receptor (AR) and the estrogen receptors ESR1 and ESR2. Binds PtdIns3P and to a lesser extent, PtdIns3,5P2 and PtdIns5P in vitro. Interaction with PtdIns3P is required for recruitment to membranes.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	55062
Other Names	ATG18; ATG18A; WIPI49; 4930533H01Rik; D11Ertd498e; RGD1307754; WIPI1_HUMAN; WIPI1; WIPI-1; Atg18 protein homolog; WD40 repeat protein interacting with phosphoinositides of 49 kDa (WIPI 49 kDa); WIPI1_MOUSE; WD repeat domain, phosphoinositide interacting 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1:50-100
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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