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Anti-ATG14L Picoband Antibody

Catalog # ABO12169

Product Information

Application	WB, IHC-P
Primary Accession	Q6ZNE5
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Beclin 1-associated autophagy-related key regulator (ATG14) detection. Tested with WB, IHC-P in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	22863
Other Names	Beclin 1-associated autophagy-related key regulator, Barkor, Autophagy-related protein 14-like protein, Atg14L, ATG14 {ECO:0000303|PubMed:18843052}
Calculated MW	55309
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Cytoplasm . Endoplasmic reticulum membrane ; Peripheral membrane protein . Preautophagosomal structure membrane ; Peripheral membrane protein . Cytoplasmic vesicle, autophagosome membrane ; Peripheral membrane protein . Cytosolic under nutrient-rich conditions (PubMed:19050071). Following autophagy stimuli, such as starvation or rapamycin induction, predominantly detected in cytoplasmic foci, identified as isolation membranes and autophagosomes (PubMed:19050071). Accumulates on highly curved PtdIns(3)P enriched autophagic membrane via its BATS domain to sense and maintain membrane curvature (By similarity). Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme (By similarity). .
Source	Eukaryota
Protein Name	Beclin 1-associated autophagy-related key regulator
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ATG14L (70-101aa RDRERFIDKKERLSRLKSKQEEFQKEVLKAME), different from the related mouse and rat sequences by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the ATG14 family.

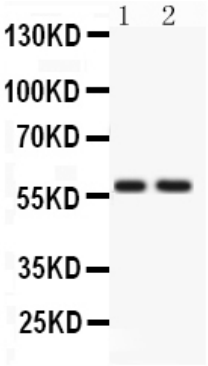
Protein Information

Name	ATG14 {ECO:0000303|PubMed:18843052}
Function	Required for both basal and inducible autophagy. Determines the localization of the autophagy-specific PI3-kinase complex PI3KC3-C1 (PubMed:18843052, PubMed:19050071). Plays a role in autophagosome formation and MAP1LC3/LC3 conjugation to phosphatidylethanolamine (PubMed:19270696, PubMed:20713597). Promotes BECN1 translocation from the trans-Golgi network to autophagosomes (PubMed:20713597). Enhances PIK3C3 activity in a BECN1-dependent manner. Essential for the autophagy-dependent phosphorylation of BECN1 (PubMed:23878393). Stimulates the phosphorylation of BECN1, but suppresses the phosphorylation PIK3C3 by AMPK (PubMed:23878393). Binds to STX17-SNAP29 binary t-SNARE complex on autophagosomes and primes it for VAMP8 interaction to promote autophagosome-endolysosome fusion (PubMed:25686604, PubMed:37632749). Modulates the hepatic lipid metabolism (By similarity).
Cellular Location	Cytoplasm. Endoplasmic reticulum membrane; Peripheral membrane protein. Preautophagosomal structure membrane; Peripheral membrane protein. Cytoplasmic vesicle, autophagosome membrane; Peripheral membrane protein. Note=Cytosolic under nutrient-rich conditions (PubMed:19050071). Following autophagy stimuli, such as starvation or rapamycin induction, predominantly detected in cytoplasmic foci, identified as isolation membranes and autophagosomes (PubMed:19050071). Accumulates on highly curved PtdIns(3)P enriched autophagic membrane via its BATS domain to sense and maintain membrane curvature (By similarity). Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme (By similarity). {ECO:0000250|UniProtKB:Q8CDJ3}

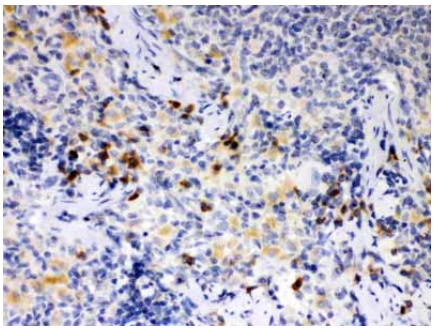
Background

ATG14 (also known as beclin-1-associated autophagy-related key regulator (Barkor) or ATG14L), an essential autophagy-specific regulator of the class III phosphatidylinositol 3-kinase complex, promotes membrane tethering of protein-free liposomes, and enhances hemifusion and full fusion of proteoliposomes reconstituted with the target (t)-SNAREs (soluble N-ethylmaleimide-sensitive factor attachment protein receptors) syntaxin 17 (STX17) and SNAP29, and the vesicle (v)-SNARE VAMP8 (vesicle-associated membrane protein 8). ATG14 binds to the SNARE core domain of STX17 through its coiled-coil domain, and stabilizes the STX17-SNAP29 binary t-SNARE complex on autophagosomes.

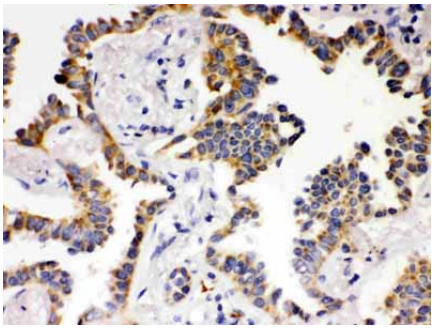
Images



Anti- ATG14L Picoband antibody, ABO12169, Western blottingAll lanes: Anti ATG14L (ABO12169) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugPredicted bind size: 59KDObserved bind size: 59KD



Anti- ATG14L Picoband antibody, ABO12169, IHC(P)IHC(P): Rat Spleen Tissue



Anti- ATG14L Picoband antibody, ABO12169, IHC(P)IHC(P): Human Lung Cancer Tissue

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