

Anti-APG5L/ATG5 Antibody

Catalog # ABO11570

Product Information

Application	WB
Primary Accession	Q9H1Y0
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Autophagy protein 5(ATG5) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	9474
Other Names	Autophagy protein 5, APG5-like, Apoptosis-specific protein, ATG5, APG5L, ASP
Calculated MW	32447
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Colocalizes with nonmuscle actin. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed (By similarity). Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme. .
Tissue Specificity	Ubiquitous. The mRNA is present at similar levels in viable and apoptotic cells, whereas the protein is dramatically highly expressed in apoptotic cells.
Source	Eukaryota
Protein Name	Autophagy protein 5
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg Na ₃ .
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human APG5L(82-97aa DRFDQFWAINRKLMEY), identical to the related mouse sequence, and different from the related rat sequence by one amino acid.
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.

Protein Information

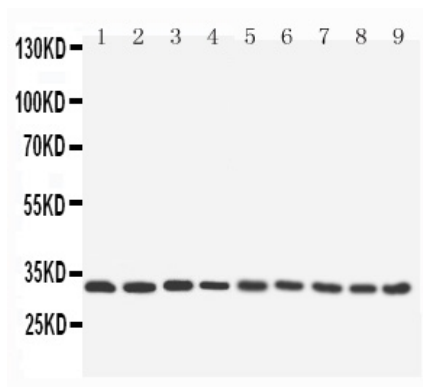
Name	ATG5 (HGNC:589)
Synonyms	APG5L, ASP
Function	Involved in autophagic vesicle formation. Conjugation with ATG12, through a ubiquitin-like conjugating system involving ATG7 as an E1-like activating enzyme and ATG10 as an E2-like conjugating enzyme, is essential for its function. The ATG12-ATG5 conjugate acts as an E3- like enzyme which is required for lipidation of ATG8 family proteins and their association to the vesicle membranes. Involved in mitochondrial quality control after oxidative damage, and in subsequent cellular longevity. Plays a critical role in multiple aspects of lymphocyte development and is essential for both B and T lymphocyte survival and proliferation. Required for optimal processing and presentation of antigens for MHC II. Involved in the maintenance of axon morphology and membrane structures, as well as in normal adipocyte differentiation. Promotes primary ciliogenesis through removal of OFD1 from centriolar satellites and degradation of IFT20 via the autophagic pathway. As part of the ATG8 conjugation system with ATG12 and ATG16L1, required for recruitment of LRRK2 to stressed lysosomes and induction of LRRK2 kinase activity in response to lysosomal stress (By similarity).
Cellular Location	Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Note=Colocalizes with nonmuscle actin. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed (By similarity). Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme. Under starved conditions, the ATG12-ATG5-ATG16L1 complex is translocated to phagophores driven by RAB33B (PubMed:32960676). {ECO:0000250, ECO:0000269 PubMed:32960676}
Tissue Location	Ubiquitous. The mRNA is present at similar levels in viable and apoptotic cells, whereas the protein is dramatically highly expressed in apoptotic cells

Background

Autophagy protein 5 is a protein that in humans is encoded by the ATG5 gene. It is also known as APG5 or ASP, and this gene is mapped to 6q21. It is found that knockdown of ATG5 in hepatocytes increased triglyceride levels with oleate or a second endogenous stimulus for triglyceride formation. These hepatocytes with ATG5 knockdown also had increased lipid droplet number and size. ATG5 is an E3 ubiquitin ligase which is necessary for autophagy due to its role in autophagosome elongation. It is activated by ATG7 and forms a complex with ATG12 and ATG16L1. This complex is necessary for LC3-1 conjugation to PE to form LC3-II.

Images

Anti-APG5L/ATG5 antibody, ABO11570, All Western blottingAll lanes: Anti- ATG5(ABO11570) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 4ougLane 2: Rat Spleen



Tissue Lysate at 40ugLane 3: Rat Kidney Tissue Lysate at 40ugLane 4: HELA Whole Cell Lysate at 40ugLane 5: RAJI Whole Cell Lysate at 40ugLane 6: NIH Whole Cell Lysate at 40ugLane 7: HEPG2 Whole Cell Lysate at 40ugLane 8: PC12 Whole Cell Lysate at 40ugLane 9: NRK Whole Cell Lysate at 40ugPredicted bind size: 32KDObserved bind size: 32KD

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