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# Anti-APG5L/ATG5 Antibody

**Catalog # ABO11570**

## Specification

### Anti-APG5L/ATG5 Antibody - 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.

### Anti-APG5L/ATG5 Antibody - Additional Information

**Gene ID** 9474

**Other Names**
Autophagy protein 5, APG5-like, Apoptosis-specific protein, ATG5, APG5L, ASP

**Calculated MW**
32447 MW KDa

**Application Details**
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**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.

**Protein Name**
Autophagy protein 5

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

**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.** |

## Anti-APG5L/ATG5 Antibody - 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

## Anti-APG5L/ATG5 Antibody - Protocols

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

- Western Blot
- Blocking Peptides

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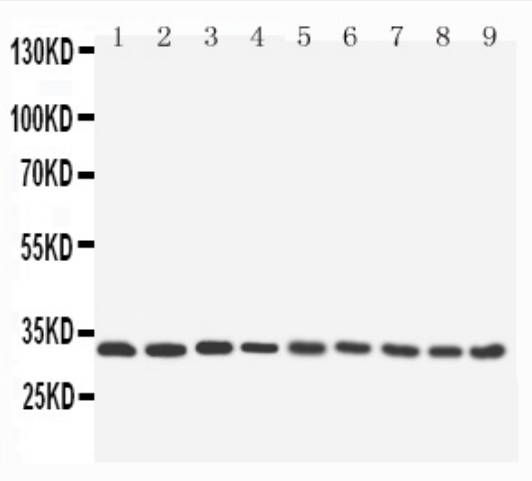
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

**Anti-APG5L/ATG5 Antibody - 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 4ougLane 3: Rat Kidney Tissue Lysate at 4ougLane 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

**Anti-APG5L/ATG5 Antibody - 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.