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# Anti-Apg7 Picoband Antibody
**Catalog # ABO12167**

## Specification

### Anti-Apg7 Picoband Antibody - Product Information

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|---|---|
| Application | **WB** |
| Primary Accession | O95352 |
| Host | **Rabbit** |
| Reactivity | **Human, Mouse, Rat** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for Ubiquitin-like modifier-activating enzyme ATG7(ATG7) detection. Tested with WB in Human;Mouse;Rat.

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

### Anti-Apg7 Picoband Antibody - Additional Information

**Gene ID** 10533

**Other Names**
Ubiquitin-like modifier-activating enzyme ATG7, ATG12-activating enzyme E1 ATG7, Autophagy-related protein 7, APG7-like, hAGP7, Ubiquitin-activating enzyme E1-like protein, ATG7, APG7L

**Calculated MW**
77960 MW KDa

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

**Subcellular Localization**
Cytoplasm . Preautophagosomal structure . Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme. .

**Tissue Specificity**
Widely expressed, especially in kidney, liver, lymph nodes and bone marrow. .

**Protein Name**
Ubiquitin-like modifier-activating enzyme ATG7

**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 C-terminus of human Apg7 (673-703aa HSFLEDLTGLTLLHQETQAAEIWDMSDDETI), 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.** |

## Anti-Apg7 Picoband Antibody - Protein Information

**Name** ATG7 (HGNC:16935)

**Synonyms** APG7L

**Function**
E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to vacuole transport (Cvt) and autophagy. Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine. Both systems are needed for the ATG8 association to Cvt vesicles and autophagosomes membranes. Required for autophagic death induced by caspase-8 inhibition. Facilitates LC3-I lipidation with phosphatidylethanolamine to form LC3-II which is found on autophagosomal membranes (PubMed:<a href="http://www.uniprot.org/citations/34161705" target="_blank">34161705</a>). Required for mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production. Modulates p53/TP53 activity to regulate cell cycle and survival during metabolic stress. Also plays a key role in the maintenance of axonal homeostasis, the prevention of axonal degeneration, the maintenance of hematopoietic stem cells, the formation of Paneth cell granules, as well as in adipose differentiation. Plays a role in regulating the liver clock and glucose metabolism by mediating the autophagic degradation of CRY1 (clock repressor) in a time-dependent manner (By similarity).

**Cellular Location**
Cytoplasm. Preautophagosomal structure. Note=Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme

**Tissue Location**
Widely expressed, especially in kidney, liver, lymph nodes and bone marrow.

## Anti-Apg7 Picoband Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

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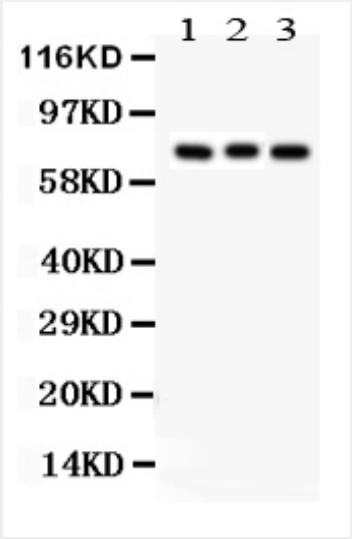
- Flow Cytomety
- Cell Culture

**Anti-Apg7 Picoband Antibody - Images**




Anti- APG7 Picoband antibody, ABO12167, Western blottingAll lanes: Anti APG7 (ABO12167) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugLane 3: 293T Whole Cell Lysate at 40ugPredicted bind size: 78KDObserved bind size: 78KD

**Anti-Apg7 Picoband Antibody - Background**

Autophagy-related protein 7 is a protein that in humans is encoded by the ATG7 gene. It is mapped to 3p25.3. This gene was identified based on homology to Pichia pastoris GSA7 and Saccharomyces cerevisiae APG7. In the yeast, the protein appears to be required for fusion of peroxisomal and vacuolar membranes. The protein also shows homology to the ATP-binding and catalytic sites of the E1 ubiquitin activating enzymes. ATG7 is essential for the Apg12 conjugation system that mediates membrane fusion in autophagy. It is found that when nutrients are limited, ATG7 can regulate p53-dependent cell cycle and cell death pathways.