

Anti-Apg7 Antibody

Catalog # ABO11571

Product Information

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.

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
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse
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. .
Source	Eukaryota
Protein Name	Ubiquitin-like modifier-activating enzyme ATG7
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 at the C-terminus of human Apg7(652-669aa KVLQYEREGFNFLAKVF), different from the related mouse sequence by one amino acid, and from the related rat sequence 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.

Protein Information

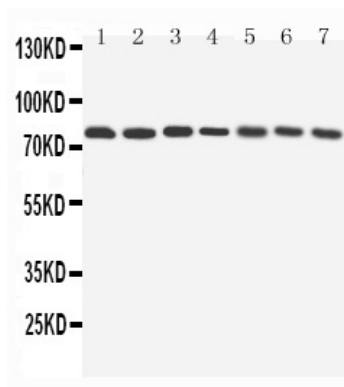
Name	ATG7 (HGNC:16935)
Synonyms	APG7L
Function	E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to vacuole transport (Cvt) and autophagy. Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine. 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: 34161705). 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.

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.

Images

Anti-Apg7 antibody, ABO11571, All Western blottingAll lanes: Anti-ATG7(ABO11571) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 40ugLane 2: Rat Kidney Tissue Lysate at 40ugLane 3: Human Placenta Tissue Lysate at 40ugLane 4: HELA Whole Cell Lysate at 40ugLane 5: JURKAT Whole Cell Lysate at 40ugLane 6: 293T Whole Cell Lysate at 40ugLane 7: HEPG2 Whole Cell Lysate at 40ugPredicted bind size: 78KDObserved bind size: 78KD



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