



APG7/ATG7 Antibody

Rabbit Polyclonal Antibody Catalog # ABV10703

Specification

APG7/ATG7 Antibody - Product Information

Application WB
Primary Accession 0641Y5

Other Accession
Reactivity
Host
NP_001012097
Human, Mouse
Rabbit

Clonality Polyclonal Isotype Rabbit IgG Calculated MW 77436

APG7/ATG7 Antibody - Additional Information

Gene ID 312647

Application & Usage Western blotting

(0.5-4 μg/ml). However, the optimal

conditions should be determined individually.

Other

applications have

not been determined.

Other Names

APG7L, ATG7, DKFZp434N0735, GSA7

Target/Specificity ATG7/APG7

Antibody Form Liquid

AppearanceColorless liquid

Formulation

0.5 mg/ml affinity purified rabbit anti-APG7/ATG7 in PBS containing 30% glycerol, 0.5 mg/ml BSA and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

APG7/ATG7 Antibody - Background

Autophagy, the process of bulk degradation of cellular proteins thro µgh an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components. This process is negatively regulated by TOR (Target of rapamycin) thro ugh phosphorylation of autophagy protein APG1. Another member of the autophagy family of proteins is APG7 which was identified in yeast as a ubiquitin-E1-like enzyme; this function is conserved in the mammalian homolog (4). In mammalian cells, APG7 is essential for autophagy conjugation systems, autophagosome formation, starvation-induced bulk degradation of proteins and organelles. It has been suggested that caspase-8 may alter APG7 levels and thus the APG7 program of autophagic cell death.



Reconstitution & Storage -20 °C

Background Descriptions

Precautions

APG7/ATG7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

APG7/ATG7 Antibody - Protein Information

Name Atg7

Synonyms Apg7l

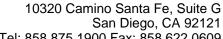
Function

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. 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. Plays also 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 (By similarity). 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=Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme

Tissue Location
Widely expressed..



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APG7/ATG7 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture