

APG7/ATG7 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10703**Specification**

APG7/ATG7 Antibody - Product Information

Application	WB
Primary Accession	Q641Y5
Other Accession	NP_001012097
Reactivity	Human, Mouse
Host	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

Appearance

Colorless 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.

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 {ECO:0000312|RGD:1304817}

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 (By similarity). 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 (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..

APG7/ATG7 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

APG7/ATG7 Antibody - Images

APG7/ATG7 Antibody - Background

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomal-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) through phosphorylation of autophagy protein ATG1. Another member of the autophagy family of proteins is ATG7 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.