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Apg7 / ATG7 Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS12165

Specification

Apg7 / ATG7 Antibody (C-Terminus) - Product Information

Application	**IHC, ICC, IF**
Primary Accession	O95352
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**78kDa KDa**

Apg7 / ATG7 Antibody (C-Terminus) - 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

Target/Specificity
17 amino acid peptide from near the carboxy terminus of human APG7.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
Apg7 / ATG7 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

Apg7 / ATG7 Antibody (C-Terminus) - 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. 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=Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme

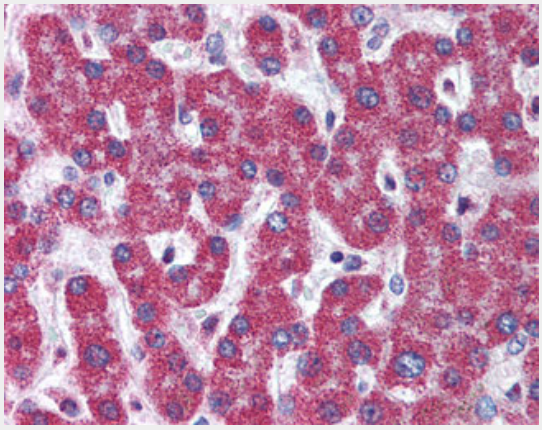
Tissue Location
Widely expressed, especially in kidney, liver, lymph nodes and bone marrow.

Apg7 / ATG7 Antibody (C-Terminus) - Protocols

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

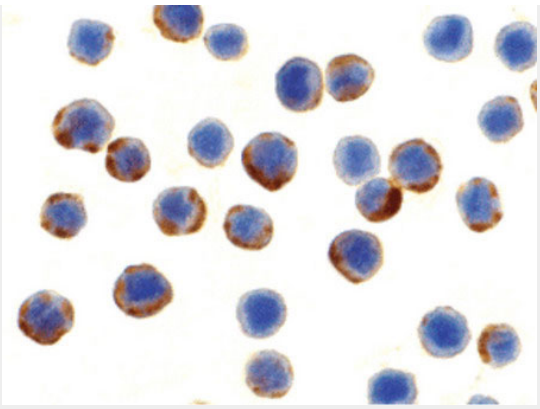
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Apg7 / ATG7 Antibody (C-Terminus) - Images

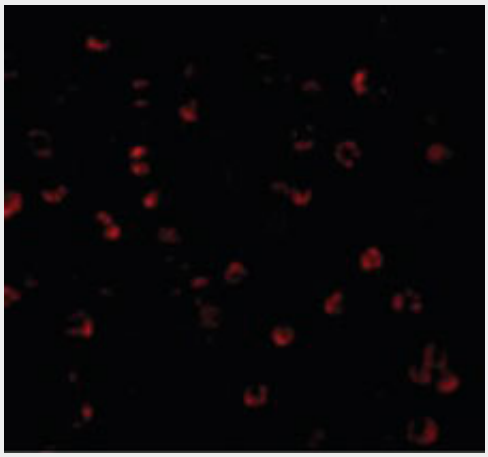


Anti-ATG7 antibody IHC of human liver.

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Immunocytochemistry of APG7 in MCF7 cells with APG7 antibody at 10 ug/ml.



Immunofluorescence of APG7 in MCF7 cells with APG7 antibody at 20 ug/ml.

Apg7 / ATG7 Antibody (C-Terminus) - Background

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.

Apg7 / ATG7 Antibody (C-Terminus) - References

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Ota T.,et al.Nat. Genet. 36:40-45(2004).
Muzny D.M.,et al.Nature 440:1194-1198(2006).
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