

Apg7 / ATG7 Antibody (N-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS12166

Specification

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

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

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

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

Tissue Location

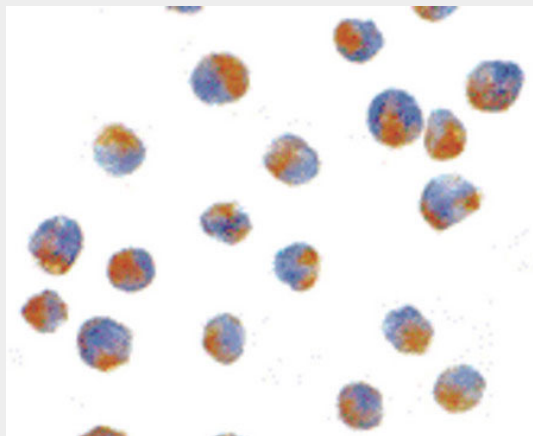
Widely expressed, especially in kidney, liver, lymph nodes and bone marrow.

Apg7 / ATG7 Antibody (N-Terminus) - Protocols

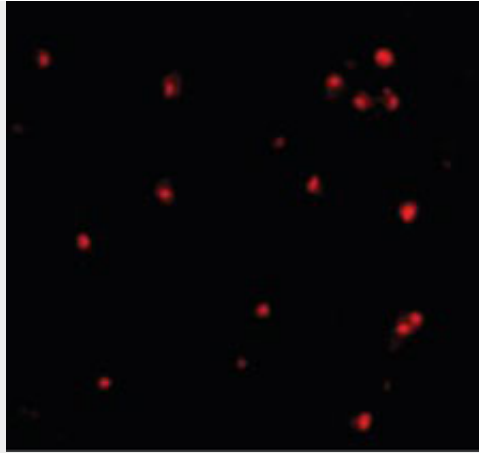
Provided below are standard protocols that you may find useful for product applications.

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

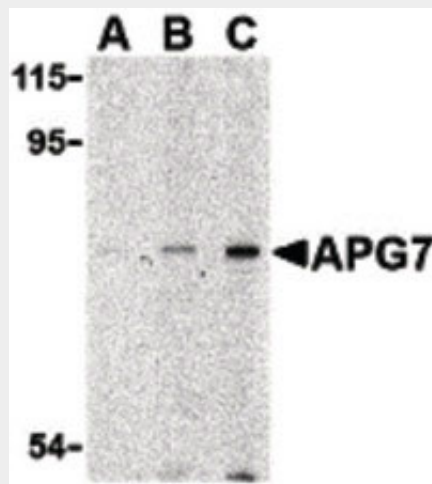
Apg7 / ATG7 Antibody (N-Terminus) - Images



Immunocytochemistry of APG7 in L1210 cells with APG7 antibody at 10 ug/ml.



Immunofluorescence of APG7 in L1210 cells with APG7 antibody at 10 ug/ml.



Western blot of APG7 in L1210 cell lysate with APG7 antibody at (A) 1, (B) 2 and (C) 4 ug/ml.

Apg7 / ATG7 Antibody (N-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 (N-Terminus) - References

- Yuan W.,et al.Mol. Biol. Cell 10:1353-1366(1999).
- Ota T.,et al.Nat. Genet. 36:40-45(2004).
- Muzny D.M.,et al.Nature 440:1194-1198(2006).
- Bechtel S.,et al.BMC Genomics 8:399-399(2007).
- Tanida I.,et al.J. Biol. Chem. 276:1701-1706(2001).