

ATG16L Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1817d

Specification

ATG16L Antibody - Product Information

Application	IF, WB,E
Primary Accession	O676U5
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig

ATG16L Antibody - Additional Information

Gene ID 55054

Other Names

Autophagy-related protein 16-1, APG16-like 1, ATG16L1, APG16L

Target/Specificity

This APG16L antibody is generated from rabbits immunized with a recombinant fragment protein from human APG16L.

Dilution

IF~~1:100
WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

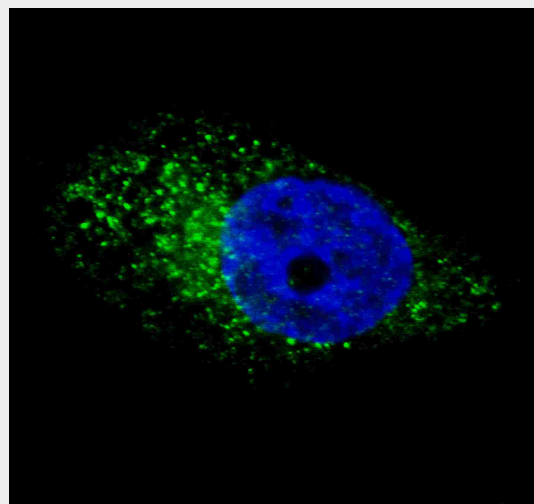
Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

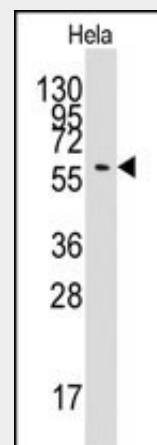
Precautions

ATG16L Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATG16L Antibody - Protein Information



Fluorescent image of U251 cells stained with ATG16L antibody. U251 cells were treated with Chloroquine (50 μ M, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP1817d ATG16L primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 μ g/ml, 5 min). ATG16L immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells, supported by Human Protein Atlas Data (<http://www.proteinatlas.org/ENSG00000085978>).



Name ATG16L1

Synonyms APG16L

Function

Plays an essential role in autophagy: interacts with ATG12- ATG5 to mediate the conjugation of phosphatidylethanolamine (PE) to LC3 (MAP1LC3A, MAP1LC3B or MAP1LC3C), to produce a membrane-bound activated form of LC3 named LC3-II. Thereby, controls the elongation of the nascent autophagosomal membrane (PubMed: [24553140](http://www.uniprot.org/citations/24553140)), PubMed: [23376921](http://www.uniprot.org/citations/23376921)), PubMed: [24954904](http://www.uniprot.org/citations/24954904)), PubMed: [27273576](http://www.uniprot.org/citations/27273576)), PubMed: [23392225](http://www.uniprot.org/citations/23392225)), PubMed: [25645662](http://www.uniprot.org/citations/25645662)), PubMed: [24238340](http://www.uniprot.org/citations/24238340)). Instead, promotes with NOD2 an autophagy-dependent antibacterial pathway (PubMed: [20637199](http://www.uniprot.org/citations/20637199)), PubMed: [18849966](http://www.uniprot.org/citations/18849966)).

Cellular Location

Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Note=Recruited to omegasomes membranes by WIPI2 Omegasomes are endoplasmic reticulum connected structures at the origin of preautophagosomal structures. Localized to preautophagosomal structure (PAS) where it is involved in the

Western blot analysis of anti-APG16 Pab (Cat.#AP1817d) in Hela cell line lysates (35ug/lane).APG16(arrow) was detected using the purified Pab.

ATG16L Antibody - Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole).

The APG12-APG5-APG16L complex is essential for the elongation of autophagic isolation membranes. This complex initially associates in uniform distribution with small vesicle membranes. During membrane elongation, the complex partitions, with a great concentration building on the outer side of the isolation membrane. Upon completion of the formation of the autophagosome, the APG12-APG5-APG16L dissociates from the membrane.

ATG16L Antibody - References

References for protein:

- 1.Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
- 2.Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005)
- 3.Greenberg JT. Dev Cell. 8(6):799-801. (2005)
- 4.Levine B. Cell. 120(2):159-62. (2005)
- 5.Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)

References for U251 cell line:

1. Westermark B.; Pontén J.; Hugosson R. (1973). "Determinants for the establishment of permanent tissue culture lines from human gliomas". Acta Pathol Microbiol Scand A. 81:791-805. [PMID: 4359449].
2. Pontén, J.,Westermark B. (1978). "Properties of Human Malignant Glioma Cells in Vitro". Medical Biology 56: 184-193.[PMID: 359950].

membrane targeting of ATG5 Localizes also to discrete punctae along the ciliary axoneme
{ECO:0000250|UniProtKB:Q8C0J2}

3. Geng Y.;Kohli L.; Klocke B.J.; Roth K.A.(2010). "Chloroquine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent". Neuro Oncol. 12(5): 473-481.[PMID: 20406898].

ATG16L 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](#)

ATG16L Antibody - Citations

- [Autophagy in cancer associated fibroblasts promotes tumor cell survival: Role of hypoxia, HIF1 induction and NFκB activation in the tumor stromal microenvironment.](#)
- [An American College of Surgeons response to the ODHS survey.](#)