苏州工业园区新平街388号腾飞创新园2幢2层
邮编：215000
电话：0512-88856768

ATG16L Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1817b-400

Specification

ATG16L Antibody - Product info

Application	WB, IHC-P, IF
Primary Accession	Q676U5
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	68265

ATG16L Antibody - Additional info

Gene ID 55054

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

Target/Specificity
This ATG16L antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 161-190 amino acids from human ATG16L.

Dilution
WB~~1:1000
IF~~1:25
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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.

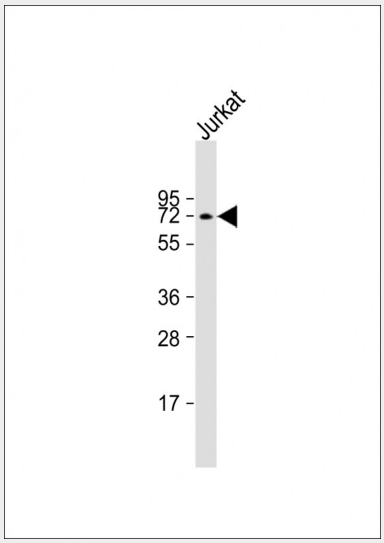
Precautions
ATG16L Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATG16L Antibody - Protein Information

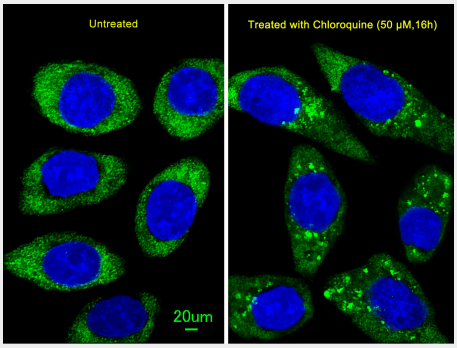
Name ATG16L1

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



Anti-ATG16L Antibody at 1:1000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 68 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunofluorescent analysis of U251 cells, using ATG16L Antibody(Cat. #AP1817b). U251 cells(right) were treated with Chloroquine (50 µM,16h). AP1817b was diluted at 1:25 dilution. Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green).DAPI was used to stain the cell nuclear (blue).

of LC3 named LC3-II. Thereby, controls the elongation of the nascent autophagosomal membrane (PubMed:24553140, PubMed:23376921, PubMed:24954904, PubMed:27273576, PubMed:23392225). Regulates mitochondrial antiviral signaling (MAVS)-dependent type I interferon (IFN-I) production (PubMed:25645662). Negatively regulates NOD1- and NOD2- driven inflammatory cytokine response (PubMed:24238340). Instead, promotes with NOD2 an autophagy-dependent antibacterial pathway (PubMed:20637199). Plays a role in regulating morphology and function of Paneth cell (PubMed:18849966).

Cellular Location

Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Note=Recruited to omegasomes membranes by WIPI2 Omegasomes are endoplasmic reticulum connected strutures at the origin of preautophagosomal structures. Localized to preautophagosomal structure (PAS) where it is involved in the membrane targeting of ATG5. Localizes also to discrete punctae along the ciliary axoneme. {ECO:0000250|UniProtKB:Q8C0J2}

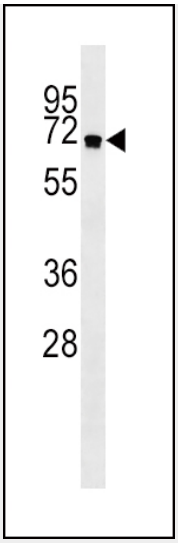
ATG16L Antibody - Protocols

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

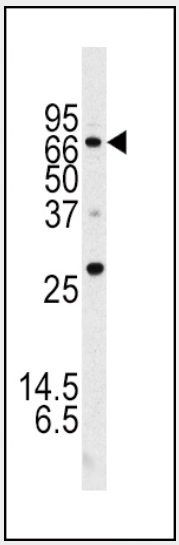
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ATG16L Antibody - Background

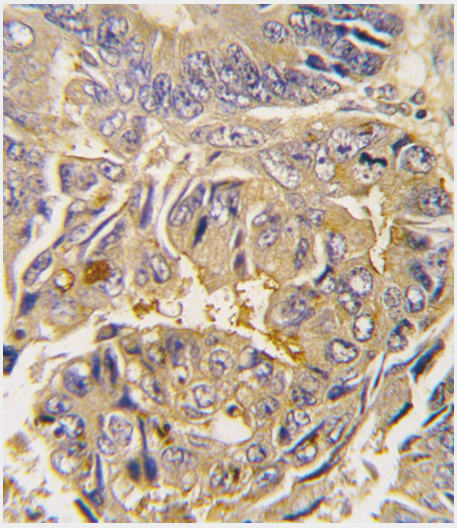
Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes 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 esential 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.



APG16L Antibody (Cat. #AP1817b) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the APG16L antibody detected the APG16L protein (arrow).



Western blot of APG16L (L92) Pab (Cat. #AP1817b) in mouse brain tissue lysate.

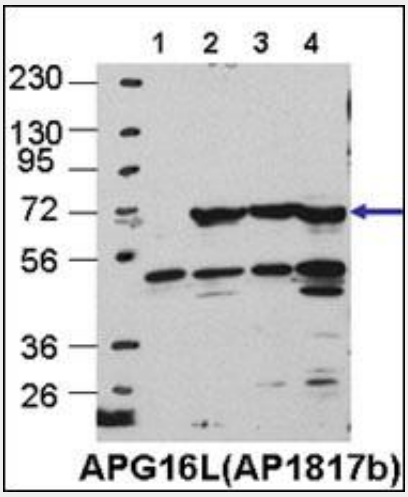


Formalin-fixed and paraffin-embedded human colon carcinoma tissue reacted with Autophagy APG16L antibody (L176), which was peroxidase-conjugated to the

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]. 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].

secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Cos7, HEK293, MEF, and Hela cells, left to right, respectively. Data courtesy of Drs. Jiefei Geng and Dan Klionsky, University of Michigan.

ATG16L Antibody - Citations

- Integrative analysis of Paneth cell proteomic and transcriptomic data from intestinal organoids reveals functional processes dependent on autophagy.
- TRIM16 controls assembly and degradation of protein aggregates by modulating the p62-NRF2 axis and autophagy.
- 1,25(OH)2 D3 attenuates hepatic steatosis by inducing autophagy in mice.
- Intraflagellar transport protein IFT20 is essential for male fertility and spermiogenesis in mice.
- Elevated p62/SQSTM1 determines the fate of autophagy-deficient neural stem cells by increasing superoxide.
- Intestinal epithelial vitamin D receptor deletion leads to defective autophagy in colitis.
- Atg16L1 deficiency confers protection from uropathogenic Escherichia coli infection in vivo.
- Overexpression of the autophagic beclin-1 protein clears mutant ataxin-3 and alleviates Machado-Joseph disease.
- Nod1 and Nod2 direct autophagy by recruiting ATG16L1 to the plasma membrane at the site of bacterial entry.
- Overexpression and altered subcellular localization of autophagy-related 16-like 1 in human oral squamous-cell carcinoma: correlation with lymphovascular invasion and lymph-node metastasis.