

**ATG16L1 / ATG16L Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS12424****Specification****ATG16L1 / ATG16L Antibody (Internal) - Product Information**

Application	ICC, IF
Primary Accession	<a href="#">Q676U5</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68kDa KDa

**ATG16L1 / ATG16L Antibody (Internal) - Additional Information**

Gene ID 55054

**Other Names**

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

**Reconstitution & Storage**

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

**Precautions**

ATG16L1 / ATG16L Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**ATG16L1 / ATG16L Antibody (Internal) - Protein Information**

**Name** ATG16L1 {ECO:0000303|PubMed:17200669, ECO:0000312|HGNC:HGNC:21498}

**Function**

Plays an essential role in both canonical and non-canonical autophagy: interacts with ATG12-ATG5 to mediate the lipidation to ATG8 family proteins (MAP1LC3A, MAP1LC3B, MAP1LC3C, GABARAPL1, GABARAPL2 and GABARAP) (PubMed: [23376921](http://www.uniprot.org/citations/23376921) / [23392225](http://www.uniprot.org/citations/23392225) / [24553140](http://www.uniprot.org/citations/24553140) / [24954904](http://www.uniprot.org/citations/24954904) / [27273576](http://www.uniprot.org/citations/27273576) / [29317426](http://www.uniprot.org/citations/29317426) / [30778222](http://www.uniprot.org/citations/30778222) / [33909989](http://www.uniprot.org/citations/33909989)). Acts as a molecular hub, coordinating autophagy pathways via distinct domains that support either canonical or non-canonical signaling (PubMed: [29317426](http://www.uniprot.org/citations/29317426) / [30778222](http://www.uniprot.org/citations/30778222)). During canonical autophagy, interacts with ATG12-ATG5 to mediate the conjugation of phosphatidylethanolamine (PE) to ATG8 proteins, to produce a membrane-bound activated form of

ATG8 (PubMed:<a href="http://www.uniprot.org/citations/23376921" target="\_blank">23376921</a>, PubMed:<a href="http://www.uniprot.org/citations/23392225" target="\_blank">23392225</a>, PubMed:<a href="http://www.uniprot.org/citations/24553140" target="\_blank">24553140</a>, PubMed:<a href="http://www.uniprot.org/citations/24954904" target="\_blank">24954904</a>, PubMed:<a href="http://www.uniprot.org/citations/27273576" target="\_blank">27273576</a>). Thereby, controls the elongation of the nascent autophagosomal membrane (PubMed:<a href="http://www.uniprot.org/citations/23376921" target="\_blank">23376921</a>, PubMed:<a href="http://www.uniprot.org/citations/23392225" target="\_blank">23392225</a>, PubMed:<a href="http://www.uniprot.org/citations/24553140" target="\_blank">24553140</a>, PubMed:<a href="http://www.uniprot.org/citations/24954904" target="\_blank">24954904</a>, PubMed:<a href="http://www.uniprot.org/citations/27273576" target="\_blank">27273576</a>). As part of the ATG8 conjugation system with ATG5 and ATG12, required for recruitment of LRRK2 to stressed lysosomes and induction of LRRK2 kinase activity in response to lysosomal stress (By similarity). Also involved in non-canonical autophagy, a parallel pathway involving conjugation of ATG8 proteins to single membranes at endolysosomal compartments, probably by catalyzing conjugation of phosphatidylserine (PS) to ATG8 (PubMed:<a href="http://www.uniprot.org/citations/33909989" target="\_blank">33909989</a>). Non-canonical autophagy plays a key role in epithelial cells to limit lethal infection by influenza A (IAV) virus (By similarity). Regulates mitochondrial antiviral signaling (MAVS)-dependent type I interferon (IFN-I) production (PubMed:<a href="http://www.uniprot.org/citations/22749352" target="\_blank">22749352</a>, PubMed:<a href="http://www.uniprot.org/citations/25645662" target="\_blank">25645662</a>). Negatively regulates NOD1- and NOD2-driven inflammatory cytokine response (PubMed:<a href="http://www.uniprot.org/citations/24238340" target="\_blank">24238340</a>). Instead, promotes an autophagy-dependent antibacterial pathway together with NOD1 or NOD2 (PubMed:<a href="http://www.uniprot.org/citations/20637199" target="\_blank">20637199</a>). Plays a role in regulating morphology and function of Paneth cell (PubMed:<a href="http://www.uniprot.org/citations/18849966" target="\_blank">18849966</a>).

#### Cellular Location

Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Endosome membrane; Peripheral membrane protein. Lysosome membrane; Peripheral membrane protein. Note=Recruited to omegasomes membranes by WIPI2 (By similarity). Omegasomes are endoplasmic reticulum connected structures at the origin of preautophagosomal structures (By similarity) Localized to preautophagosomal structure (PAS) where it is involved in the membrane targeting of ATG5 (By similarity). Localizes also to discrete punctae along the ciliary axoneme (By similarity). Upon activation of non-canonical autophagy, recruited to single-membrane endolysosomal compartments (PubMed:29317426) {ECO:0000250|UniProtKB:Q8C0J2, ECO:0000269|PubMed:29317426}

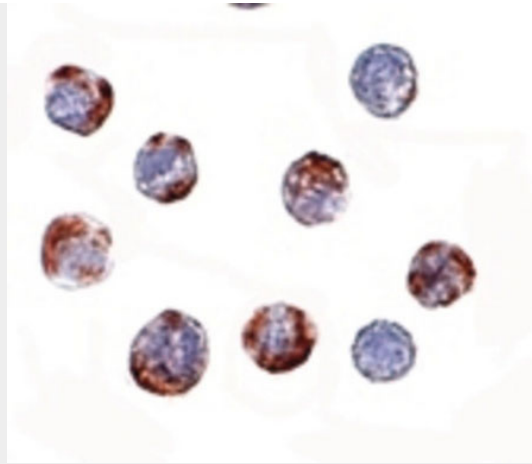
#### ATG16L1 / ATG16L Antibody (Internal) - Protocols

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

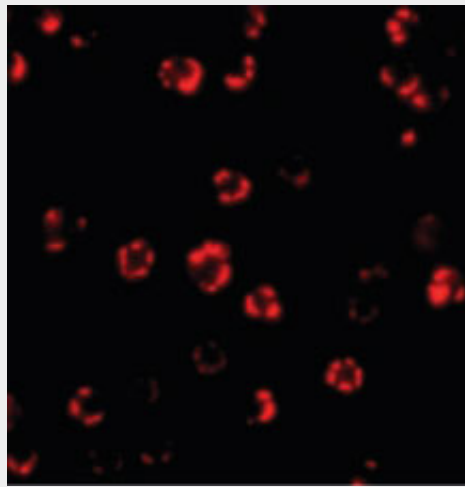
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### ATG16L1 / ATG16L Antibody (Internal) - Images





Immunocytochemistry of ATG16 in HeLa cells with ATG16 antibody at 2 ug/ml.



Immunofluorescence of ATG16 in HeLa cells with ATG16 antibody at 4 ug/ml.

#### **ATG16L1 / ATG16L Antibody (Internal) - Background**

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.

#### **ATG16L1 / ATG16L Antibody (Internal) - References**

Zheng H.,et al.DNA Seq. 15:303-305(2004).  
Hampe J.,et al.Nat. Genet. 39:207-211(2007).  
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Hillier L.W.,et al.Nature 434:724-731(2005).