

**AUTL1 / ATG4C Antibody (C-Terminus)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS16440****Specification**

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**AUTL1 / ATG4C Antibody (C-Terminus) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IHC, IF                |
| Primary Accession | <a href="#">O96DT6</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 52kDa KDa              |

**AUTL1 / ATG4C Antibody (C-Terminus) - Additional Information****Gene ID** 84938**Other Names**

Cysteine protease ATG4C, 3.4.22.-, AUT-like 3 cysteine endopeptidase, Autophagin-3, Autophagy-related cysteine endopeptidase 3, Autophagy-related protein 4 homolog C, ATG4C, APG4C, AUTL1, AUTL3

**Target/Specificity**

ATG4C antibody is human, mouse and rat reactive. ATG4C is predicted to not cross-react with other ATG4 proteins.

**Reconstitution & Storage**

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

**Precautions**

AUTL1 / ATG4C Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**AUTL1 / ATG4C Antibody (C-Terminus) - Protein Information****Name** ATG4C {ECO:0000303|PubMed:21177865, ECO:0000312|HGNC:HGNC:16040}**Function**

Cysteine protease that plays a key role in autophagy by mediating both proteolytic activation and delipidation of ATG8 family proteins (PubMed:<a href="http://www.uniprot.org/citations/21177865" target="\_blank">21177865</a>, PubMed:<a href="http://www.uniprot.org/citations/29458288" target="\_blank">29458288</a>, PubMed:<a href="http://www.uniprot.org/citations/30661429" target="\_blank">30661429</a>). The protease activity is required for proteolytic activation of ATG8 family proteins: cleaves the C-terminal amino acid of ATG8 proteins MAP1LC3 and GABARAPL2, to reveal a C-terminal glycine (PubMed:<a href="http://www.uniprot.org/citations/21177865" target="\_blank">21177865</a>). Exposure of the glycine at the C-terminus is essential for ATG8 proteins conjugation to phosphatidylethanolamine (PE) and insertion to membranes, which is necessary for autophagy (By

similarity). In addition to the protease activity, also mediates delipidation of ATG8 family proteins (PubMed:<a href="http://www.uniprot.org/citations/29458288" target="\_blank">29458288</a>, PubMed:<a href="http://www.uniprot.org/citations/33909989" target="\_blank">33909989</a>). Catalyzes delipidation of PE-conjugated forms of ATG8 proteins during macroautophagy (PubMed:<a href="http://www.uniprot.org/citations/29458288" target="\_blank">29458288</a>, PubMed:<a href="http://www.uniprot.org/citations/33909989" target="\_blank">33909989</a>). Compared to ATG4B, the major protein for proteolytic activation of ATG8 proteins, shows weaker ability to cleave the C-terminal amino acid of ATG8 proteins, while it displays stronger delipidation activity (PubMed:<a href="http://www.uniprot.org/citations/29458288" target="\_blank">29458288</a>). In contrast to other members of the family, weakly or not involved in phagophore growth during mitophagy (PubMed:<a href="http://www.uniprot.org/citations/33773106" target="\_blank">33773106</a>).

#### Cellular Location

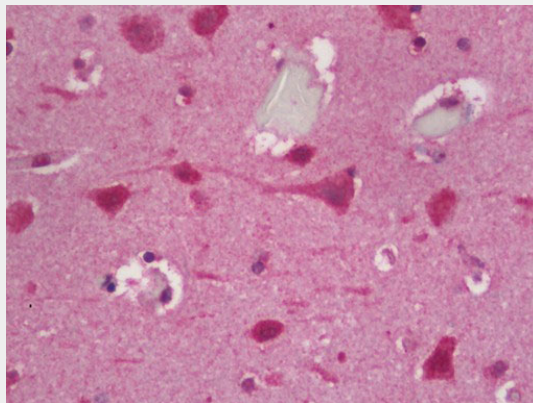
Cytoplasm {ECO:0000250|UniProtKB:Q8BGE6}.

#### AUTL1 / ATG4C Antibody (C-Terminus) - Protocols

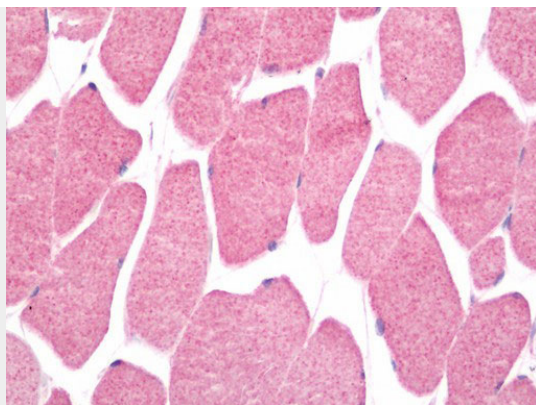
Provided below are standard protocols that you may find useful for product applications.

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

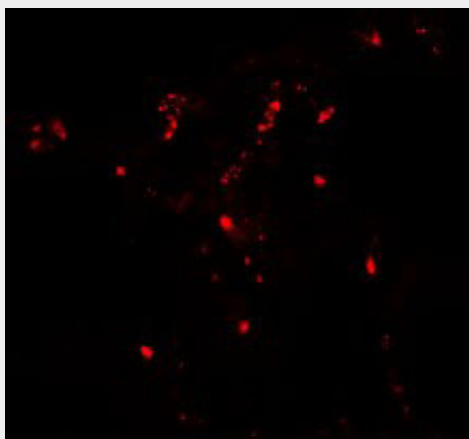
#### AUTL1 / ATG4C Antibody (C-Terminus) - Images



Human Brain, Cortex: Formalin-Fixed, Paraffin-Embedded (FFPE)



Human Skeletal Muscle: Formalin-Fixed, Paraffin-Embedded (FFPE)



Immunofluorescence of ATG4C in human lung tissue with ATG4C antibody at 20 ug/ml.

#### **AUTL1 / ATG4C Antibody (C-Terminus) - Background**

Cysteine protease required for the cytoplasm to vacuole transport (Cvt) and autophagy. Is not essential for autophagy development under normal conditions but is required for a proper autophagic response under stressful conditions such as prolonged starvation (By similarity). Cleaves the C-terminal amino acid of ATG8 family proteins MAP1LC3 and GABARAPL2, to reveal a C-terminal glycine. Exposure of the glycine at the C-terminus is essential for ATG8 proteins conjugation to phosphatidylethanolamine (PE) and insertion to membranes, which is necessary for autophagy. Has also an activity of delipidating enzyme for the PE-conjugated forms.

#### **AUTL1 / ATG4C Antibody (C-Terminus) - References**

Marino G.,et al.J. Biol. Chem. 278:3671-3678(2003).  
Chen J.M.,et al.Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Gregory S.G.,et al.Nature 441:315-321(2006).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.