

**ATG4A Rabbit mAb**  
Catalog # AP75120**Specification****ATG4A Rabbit mAb - Product Information**

Application	WB
Primary Accession	<a href="#">Q8WYN0</a>
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	45378

**ATG4A Rabbit mAb - Additional Information**

Gene ID 115201

**Other Names**  
ATG4A**Dilution**  
WB~~1/500-1/1000**Format**  
Liquid**ATG4A Rabbit mAb - Protein Information****Name** ATG4A {ECO:0000303|Ref.20, ECO:0000312|HGNC:HGNC:16489}**Function**

Cysteine protease that plays a key role in autophagy by mediating both proteolytic activation and delipidation of ATG8 family proteins (PubMed: [12473658](http://www.uniprot.org/citations/12473658), PubMed: [15169837](http://www.uniprot.org/citations/15169837), PubMed: [17347651](http://www.uniprot.org/citations/17347651), PubMed: [21177865](http://www.uniprot.org/citations/21177865), PubMed: [21245471](http://www.uniprot.org/citations/21245471), PubMed: [22302004](http://www.uniprot.org/citations/22302004), PubMed: [32732290](http://www.uniprot.org/citations/32732290)). The protease activity is required for proteolytic activation of ATG8 family proteins: cleaves the C-terminal amino acid of ATG8 proteins to reveal a C-terminal glycine (PubMed: [12473658](http://www.uniprot.org/citations/12473658), PubMed: [15169837](http://www.uniprot.org/citations/15169837), PubMed: [17347651](http://www.uniprot.org/citations/17347651), PubMed: [21177865](http://www.uniprot.org/citations/21177865), PubMed: [21245471](http://www.uniprot.org/citations/21245471), PubMed: [22302004](http://www.uniprot.org/citations/22302004)). 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

(PubMed:<a href="http://www.uniprot.org/citations/12473658" target="\_blank">12473658</a>, PubMed:<a href="http://www.uniprot.org/citations/15169837" target="\_blank">15169837</a>, PubMed:<a href="http://www.uniprot.org/citations/17347651" target="\_blank">17347651</a>, PubMed:<a href="http://www.uniprot.org/citations/21177865" target="\_blank">21177865</a>, PubMed:<a href="http://www.uniprot.org/citations/21245471" target="\_blank">21245471</a>, PubMed:<a href="http://www.uniprot.org/citations/22302004" target="\_blank">22302004</a>). Preferred substrate is GABARAPL2 followed by MAP1LC3A and GABARAP (PubMed:<a href="http://www.uniprot.org/citations/12473658" target="\_blank">12473658</a>, PubMed:<a href="http://www.uniprot.org/citations/15169837" target="\_blank">15169837</a>, PubMed:<a href="http://www.uniprot.org/citations/17347651" target="\_blank">17347651</a>, PubMed:<a href="http://www.uniprot.org/citations/21177865" target="\_blank">21177865</a>, PubMed:<a href="http://www.uniprot.org/citations/21245471" target="\_blank">21245471</a>, PubMed:<a href="http://www.uniprot.org/citations/22302004" target="\_blank">22302004</a>). Protease activity is also required to counteract formation of high-molecular weight conjugates of ATG8 proteins (ATG8ylation): acts as a deubiquitinating- like enzyme that removes ATG8 conjugated to other proteins, such as ATG3 (PubMed:<a href="http://www.uniprot.org/citations/31315929" target="\_blank">31315929</a>, PubMed:<a href="http://www.uniprot.org/citations/33773106" target="\_blank">33773106</a>). 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>). Involved in phagophore growth during mitophagy independently of its protease activity and of ATG8 proteins: acts by regulating ATG9A trafficking to mitochondria and promoting phagophore-endoplasmic reticulum contacts during the lipid transfer phase of mitophagy (PubMed:<a href="http://www.uniprot.org/citations/33773106" target="\_blank">33773106</a>).

#### Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q8BGE6}.

#### ATG4A Rabbit mAb - 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](#)

#### ATG4A Rabbit mAb - Images



