

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

Application	WB, IHC-P, IP
Primary Accession	Q8WYN0
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
IHC-P~~N/A
IP~~N/A**Format**
50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.**Storage**
Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.**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, PubMed:15169837, PubMed:17347651, PubMed:21177865, PubMed:21245471, PubMed:22302004, PubMed: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, PubMed:15169837, PubMed:17347651, PubMed:21177865, PubMed:21245471, PubMed:22302004, PubMed:32732290).

[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: [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)). Preferred substrate is GABARAPL2 followed by MAP1LC3A and GABARAP (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)). 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: [31315929](http://www.uniprot.org/citations/31315929), PubMed: [33773106](http://www.uniprot.org/citations/33773106)). In addition to the protease activity, also mediates delipidation of ATG8 family proteins (PubMed: [29458288](http://www.uniprot.org/citations/29458288), PubMed: [33909989](http://www.uniprot.org/citations/33909989)). Catalyzes delipidation of PE- conjugated forms of ATG8 proteins during macroautophagy (PubMed: [29458288](http://www.uniprot.org/citations/29458288), PubMed: [33909989](http://www.uniprot.org/citations/33909989)). 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: [29458288](http://www.uniprot.org/citations/29458288)). 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: [33773106](http://www.uniprot.org/citations/33773106)).

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



