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# ATG4C Rabbit mAb

Catalog # AP75121

## Product Information

| | |
|---|---|
| **Application** | WB, IHC-P, FC |
| **Primary Accession** | Q96DT6 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Monoclonal Antibody |
| **Isotype** | IgG |
| **Conjugate** | Unconjugated |
| **Purification** | Affinity Purified |
| **Calculated MW** | 52497 |

## Additional Information

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|---|---|
| **Gene ID** | 84938 |
| **Other Names** | ATG4C |
| **Dilution** | WB~~1:500-1:1000 IHC-P~~N/A FC~~1:50-1:100 |
| **Format** | Liquid in 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. |

## Protein Information

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|---|---|
| **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:21177865, PubMed:29458288, PubMed:30661429). 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:21177865). 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:29458288, PubMed:33909989). Catalyzes delipidation of PE-conjugated forms of ATG8 proteins during macroautophagy (PubMed:29458288, PubMed: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 |

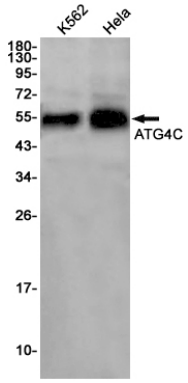
proteins, while it displays stronger delipidation activity (PubMed:29458288). In contrast to other members of the family, weakly or not involved in phagophore growth during mitophagy (PubMed:33773106).

**Cellular Location** Cytoplasm {ECO:0000250|UniProtKB:Q8BGE6}.

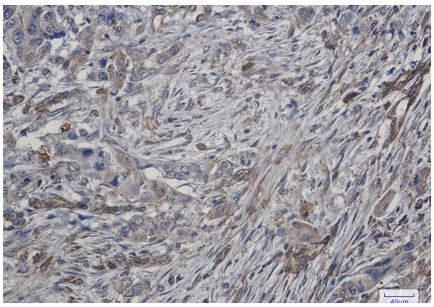
## Background

Cysteine protease required for autophagy, which cleaves the C-terminal part of either MAP1LC3, GABARAPL2 or GABARAP, allowing the liberation of form I. A subpopulation of form I is subsequently converted to a smaller form (form II). Form II, with a revealed C-terminal glycine, is considered to be the phosphatidylethanolamine (PE)-conjugated form, and has the capacity for the binding to autophagosomes.

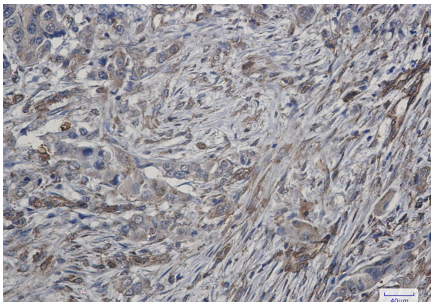
## Images




Western blot analysis of ATG4C in K562, Hela lysates using ATG4C antibody.



Immunohistochemistry analysis of paraffin-embedded Human lung cancer using ATG4C antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



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