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# ATG4C Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1933b

## Product Information

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|---|---|
| **Application** | WB, E |
| **Primary Accession** | Q96DT6 |
| **Other Accession** | NP_116241.2, NP_835739.1 |
| **Reactivity** | Mouse |
| **Predicted** | Rat, Bovine, Canine, Rabbit, Chicken |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG1,k |
| **Clone Names** | 287CT12.2.2 |
| **Calculated MW** | 52497 |

## Additional Information

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| **Gene ID** | 84938 |
| **Other Names** | Cysteine protease ATG4C, 3422-, AUT-like 3 cysteine endopeptidase, Autophagin-3, Autophagy-related cysteine endopeptidase 3, Autophagy-related protein 4 homolog C, ATG4C, APG4C, AUTL1, AUTL3 |
| **Target/Specificity** | This ATG4C monoclonal antibody is generated from mouse immunized with ATG4C recombinant protein. |
| **Dilution** | WB~~1:500~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | ATG4C Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## 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}.

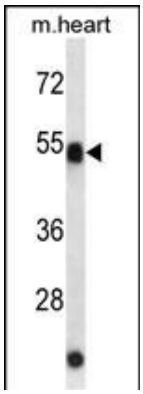
## Background

Autophagy is the process by which endogenous proteins and damaged organelles are destroyed intracellularly. Autophagy is postulated to be essential for cell homeostasis and cell remodeling during differentiation, metamorphosis, non-apoptotic cell death, and aging. Reduced levels of autophagy have been described in some malignant tumors, and a role for autophagy in controlling the unregulated cell growth linked to cancer has been proposed. This gene encodes a member of the autophagin protein family. The encoded protein is also designated as a member of the C-54 family of cysteine proteases. Alternate transcriptional splice variants, encoding the same protein, have been characterized. [provided by RefSeq].

## References

Kathiresan, S., et al. Nat. Genet. 40(2):189-197(2008)
Marino, G., et al. J. Biol. Chem. 282(25):18573-18583(2007)
Levy, D., et al. BMC Med. Genet. 8 SUPPL 1, S3 (2007) :
Marino, G., et al. J. Biol. Chem. 278(6):3671-3678(2003)

## Images




ATG4C Antibody (Cat. #AM1933b) western blot analysis in mouse heart tissue lysates (35µg/lane).This demonstrates the ATG4C antibody detected the ATG4C protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.