

Anti-ATG4C Antibody

Rabbit polyclonal antibody to ATG4C

Catalog # AP60227

Product Information

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|-------------------|------------------------|
| Application | WB, IF/IC, IHC |
| Primary Accession | Q96DT6 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 52497 |

Additional Information

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| Gene ID | 84938 |
| Other Names | APG4C; AUTL1; AUTL3; Cysteine protease ATG4C; AUT-like 3 cysteine endopeptidase; Autophagin-3; Autophagy-related cysteine endopeptidase 3; Autophagy-related protein 4 homolog C |
| Target/Specificity | KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human ATG4C. The exact sequence is proprietary. |
| Dilution | WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) |
| Format | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide. |
| Storage | Store at -20 °C.Stable for 12 months from date of receipt |

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](#)).

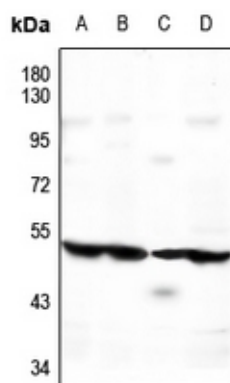
Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q8BGE6}.

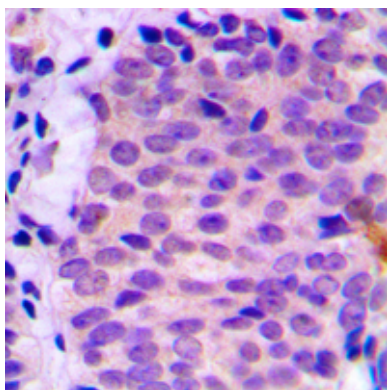
Background

KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human ATG4C. The exact sequence is proprietary.

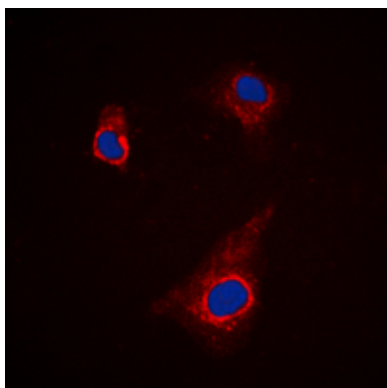
Images



Western blot analysis of ATG4C expression in AML12 (A), rat testis (B), MCF7 (C), LO2 (D) whole cell lysates.



Immunohistochemical analysis of ATG4C staining in human prostate cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of ATG4C staining in K562 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).