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ATG4C

Purified Mouse Monoclonal Antibody
Catalog # AO2577a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q96DT6
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2E10H7
Isotype	Mouse IgG1
Calculated MW	52497
Immunogen	Purified recombinant fragment of human ATG4C (AA: 321-458) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	84938
Other Names	APG4C; AUTL1; AUTL3; APG4-C
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~N/A E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATG4C is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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}.

References

1.J Biol Chem. 2007 Jun 22;282(25):18573-83.2.J Biol Chem. 2003 Feb 7;278(6):3671-8.

Images

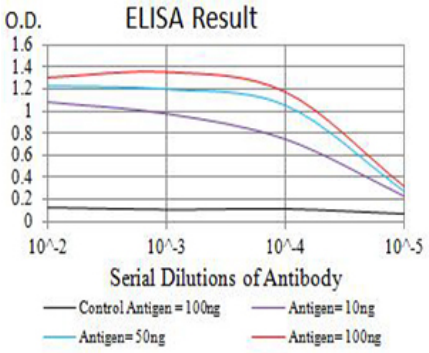


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

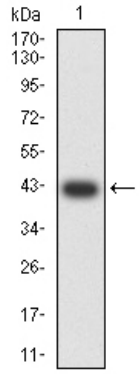


Figure 2:Western blot analysis using ATG4C mAb against human ATG4C (AA: 321-458) recombinant protein. (Expected MW is 42.2 kDa)

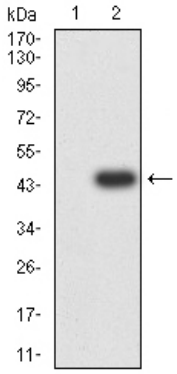


Figure 3:Western blot analysis using ATG4C mAb against HEK293 (1) and ATG4C (AA: 321-458)-hIgGFc transfected HEK293 (2) cell lysate.

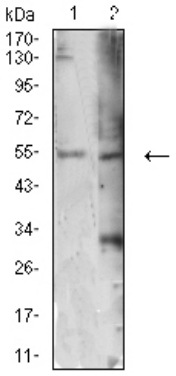


Figure 4:Western blot analysis using ATG4C mouse mAb against HEK293 (1) and MOLT4 (2) cell lysate.

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