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Anti-Atg4B Rabbit Monoclonal Antibody

Catalog # ABO13810

Product Information

Application	WB, FC
Primary Accession	Q9Y4P1
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Atg4B Rabbit Monoclonal Antibody . Tested in WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

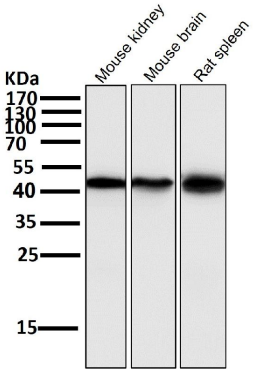
Gene ID	23192
Other Names	Cysteine protease ATG4B, 3.4.22.-, AUT-like 1 cysteine endopeptidase, Autophagy-related cysteine endopeptidase 1, Autophagin-1, Autophagy-related protein 4 homolog B, HsAPG4B, hAPG4B, ATG4B {ECO:0000303|PubMed:15187094, ECO:0000312|HGNC:HGNC:20790}
Calculated MW	44294
Application Details	WB 1:500-1:2000 FC 1:100
Subcellular Localization	Cytoplasm.
Tissue Specificity	Mainly expressed in the skeletal muscle, followed by brain, heart, liver and pancreas..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ABIA-1
Immunogen	A synthesized peptide derived from human Atg4B
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

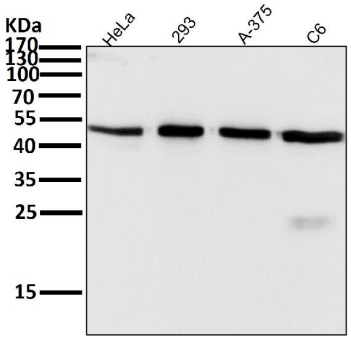
Name	ATG4B {ECO:0000303|PubMed:15187094, ECO:0000312|HGNC:HGNC:20790}
Function	Cysteine protease that plays a key role in autophagy by mediating both proteolytic activation and delipidation of ATG8 family proteins (PubMed:15169837, PubMed:15187094, PubMed:17347651, PubMed:19322194, PubMed:21177865, PubMed:22302004, PubMed:26378241, PubMed:27527864, PubMed:28633005, PubMed:28821708, PubMed:29232556, PubMed:30076329, PubMed:30443548, PubMed:30661429). Required for canonical autophagy (macroautophagy), non-canonical autophagy as well as for mitophagy (PubMed:33773106, PubMed:33909989). The protease activity is required for proteolytic activation of ATG8 family proteins: cleaves the C-terminal amino acid of ATG8 proteins MAP1LC3A, MAP1LC3B, MAP1LC3C, GABARAPL1, GABARAPL2 and GABARAP, to reveal a C- terminal glycine (PubMed:15169837, PubMed:15187094, PubMed:17347651, PubMed:19322194, PubMed:20818167, PubMed:21177865, PubMed:22302004, PubMed:27527864, PubMed:28287329, PubMed:28633005, PubMed:29458288, PubMed:30661429). 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:15169837, PubMed:15187094, PubMed:17347651, PubMed:19322194, PubMed:21177865, PubMed: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, PubMed:33773106). In addition to the protease activity, also mediates delipidation of ATG8 family proteins (PubMed:15187094, PubMed:19322194, PubMed:28633005, PubMed:29458288, PubMed:32686895, PubMed:33909989). Catalyzes delipidation of PE- conjugated forms of ATG8 proteins during macroautophagy (PubMed:15187094, PubMed:19322194, PubMed:29458288, PubMed:32686895, PubMed:33909989). Also involved in non-canonical autophagy, a parallel pathway involving conjugation of ATG8 proteins to single membranes at endolysosomal compartments, by catalyzing delipidation of ATG8 proteins conjugated to phosphatidylserine (PS) (PubMed:33909989). Compared to other members of the family (ATG4A, ATG4C or ATG4C), constitutes the major protein for proteolytic activation of ATG8 proteins, while it displays weaker delipidation activity than other ATG4 paralogs (PubMed:29458288, PubMed:30661429). 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).
Cellular Location	Cytoplasm. Cytoplasm, cytosol. Cytoplasmic vesicle, autophagosome. Endoplasmic reticulum. Mitochondrion. Note=Mainly localizes to the cytoplasm, including cytosol (PubMed:29165041). A samll potion localizes to mitochondria; phosphorylation at Ser-34 promotes localization to mitochondria (PubMed:29165041).

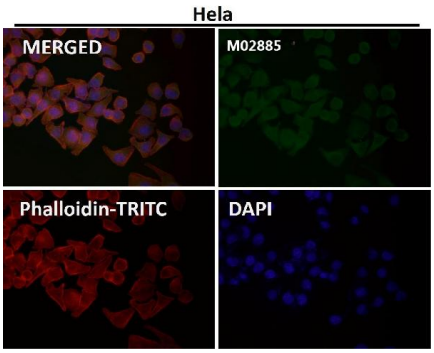
Images

All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.

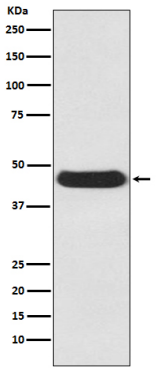


All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.





Immunofluorescent analysis using the Antibody at 1:50 dilution.



Western blot analysis of Atg4B expression in Ramos cell lysate.

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