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DANRE atg4b Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # Azb10037a

Product Information

Application	WB, E
Primary Accession	Q6DG88
Reactivity	Human, Zebrafish, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	44453
Antigen Region	1-30

Additional Information

Other Names	Cysteine protease ATG4B, 3422-, Autophagy-related protein 4 homolog B, atg4b, apg4b
Target/Specificity	This DANRE atg4b antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of DANRE atg4b.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	DANRE atg4b Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	atg4b {ECO:0000250|UniProtKB:Q9Y4P1}
Function	Cysteine protease that plays a key role in autophagy by mediating both proteolytic activation and delipidation of ATG8 family proteins. Required for canonical autophagy (macroautophagy), non- canonical autophagy as well as for mitophagy. The protease activity is required for proteolytic activation of ATG8 family proteins: cleaves the C-terminal amino acid of ATG8 proteins to reveal a C-terminal glycine. 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. 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. In addition to the protease activity, also mediates delipidation of ATG8 family proteins. Catalyzes delipidation of PE-conjugated forms of ATG8 proteins during macroautophagy. 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).

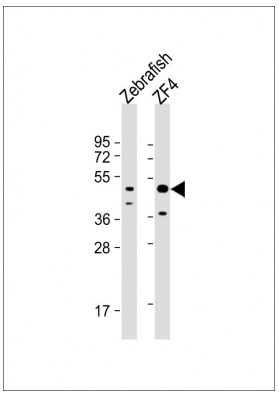
Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q9Y4P1}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9Y4P1}. Cytoplasmic vesicle, autophagosome {ECO:0000250|UniProtKB:Q9Y4P1}. Endoplasmic reticulum {ECO:0000250|UniProtKB:Q9Y4P1}. Mitochondrion {ECO:0000250|UniProtKB:Q9Y4P1}. Note=Mainly localizes to the cytoplasm, including cytosol. {ECO:0000250|UniProtKB:Q9Y4P1}

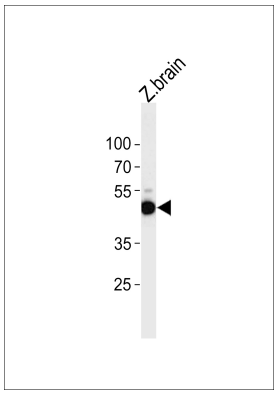
Background

Cysteine protease required for autophagy, which is able to cleave the C-terminal part of proteins that may be subsequently converted to a smaller form, with a revealed C-terminal glycine, considered to be the phosphatidylethanolamine (PE)-conjugated form. This conjugated form has the capacity for the binding to autophagosomes (By similarity).

Images



All lanes : Anti-(DANRE) atg4b Antibody (N-term) at 1:1000 dilution Lane 1: Zebrafish lysate Lane 2: ZF4 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



DANRE atg4b Antibody (N-term) (Cat. #Azb10037a) western blot analysis in zebra fish brain tissue lysates (35ug/lane).This demonstrates the DANRE atg4b antibody detected the DANRE atg4b protein (arrow).

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