

## Rabbit ATG4B Polyclonal Antibody | anti-ATG4B antibody

Anti-ATG4B Antibody

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| CATALOG #<br><b>AAA292584</b> | HOST<br><b>Rabbit</b> | REACTIVITY<br><b>Human, Mouse, Rat, Monkey</b> | APPLICATIONS<br><b>Immunohistochemistry, Western Blot</b> |
|-------------------------------|-----------------------|------------------------------------------------|-----------------------------------------------------------|

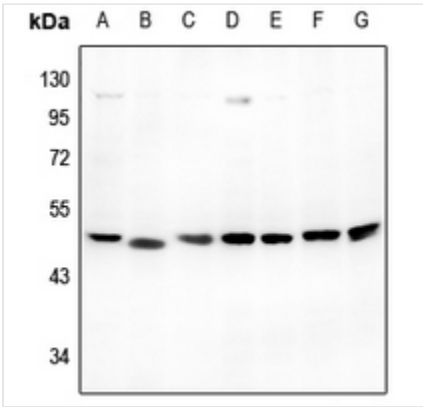
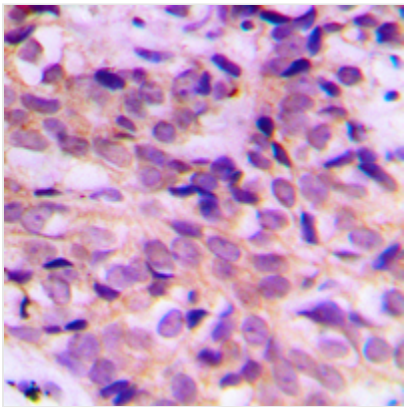
### PRODUCT SYNONYMS

ATG4B; Polyclonal Antibody; Anti-ATG4B Antibody; APG4B; AUTL1; KIAA0943; Cysteine protease ATG4B; AUT-like 1 cysteine endopeptidase; Autophagin-1; Autophagy-related cysteine endopeptidase 1; Autophagy-related protein 4 homolog B; hAPG4B; anti-ATG4B antibody

### PRODUCT SPECIFICATIONS

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| Host                                            | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Reactivity                                      | Human, Mouse, Rat, Monkey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Clonality                                       | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Specificity                                     | Recognizes endogenous levels of ATG4B protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Form/Format                                     | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Applicable Applications for anti-ATG4B antibody | IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 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:26378241, PubMed:29232556, PubMed:28821708, PubMed:30443548, PubMed:30661429, PubMed:22302004, PubMed:27527864, PubMed:28633005, PubMed:30076329). Required for canonical autophagy (macroautophagy), non-canonical autophagy as well as for mitophagy (PubMed: , PubMed: ). 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:20818167, PubMed:19322194, PubMed:21177865, PubMed:22302004, PubMed:27527864, PubMed:28633005, PubMed:29458288, PubMed:30661429, PubMed:28287329). 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: , PubMed: ,PubMed: ,PubMed: ,PubMed: ,PubMed: ). 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:28633005, PubMed:29458288, PubMed:32686895, PubMed:33909989, PubMed:19322194). Catalyzes delipidation of PE- conjugated forms of ATG8 proteins during macroautophagy (PubMed:15187094, PubMed:29458288, PubMed:32686895, PubMed:33909989, PubMed:19322194). 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: , PubMed: ). 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: ). |
| 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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Preparation and Storage                         | Store at -20 °C. Stable for 12 months from date of receipt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

IMAGES



**IHC (Immunohistochemistry)**  
Dilution: WB: (1/500 - 1/1000), IH (1/100 - 1/200)Immunohistochemical analysis of ATG4B staining in human breast 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.

**WB (Western Blot)**  
Dilution: WB (1/500 - 1/1000), IH (1/100 - 1/200)Western blot analysis of ATG4B expression in mouse testis (A), rat testis (B), C6 (C), Hela (D), PC3 (E), DLD (F), U87MG (G) whole cell lysates.

ADDITIONAL INFORMATION

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|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-ATG4B antibody | Rabbit polyclonal antibody to ATG4B<br>KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ATG4B. The exact sequence is proprietary. |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 47132611                                                                                                                                                                                                                            |
| NCBI GeneID                      | 23192                                                                                                                                                                                                                               |
| NCBI Accession #                 | NP_037457.3                                                                                                                                                                                                                         |
| NCBI GenBank Nucleotide #        | NM_013325.4                                                                                                                                                                                                                         |
| UniProt Accession #              | Q9Y4P1; Q53NU4; Q6ZUV8; Q8WYM9; Q96K07; Q96K96; Q96SZ1; Q9Y2F2; B7WNK2                                                                                                                                                              |
| Molecular Weight                 | 44,294 Da                                                                                                                                                                                                                           |
| NCBI Official Full Name          | cysteine protease ATG4B isoform a                                                                                                                                                                                                   |
| NCBI Official Synonym Full Names | autophagy related 4B, cysteine peptidase                                                                                                                                                                                            |
| NCBI Official Symbol             | ATG4B                                                                                                                                                                                                                               |
| NCBI Official Synonym Symbols    | APG4B; AUTL1                                                                                                                                                                                                                        |
| NCBI Protein Information         | cysteine protease ATG4B; hAPG4B; autophagin-1; APG4 autophagy 4 homolog B; AUT-like 1 cysteine endopeptidase; ATG4 autophagy related 4 homolog B; autophagy-related protein 4 homolog B; autophagy-related cysteine endopeptidase 1 |
| UniProt Protein Name             | Cysteine protease ATG4B                                                                                                                                                                                                             |
| UniProt Gene Name                | ATG4B                                                                                                                                                                                                                               |
| UniProt Synonym Gene Names       | APG4B; AUTL1; KIAA0943; hAPG4B                                                                                                                                                                                                      |
| UniProt Entry Name               | ATG4B_HUMAN                                                                                                                                                                                                                         |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

