

Anti-ATG4D Antibody
Rabbit polyclonal antibody to ATG4D
Catalog # AP60872

Specification

Anti-ATG4D Antibody - Product Information

Application	WB
Primary Accession	O86TL0
Other Accession	O8BGV9
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52922

Anti-ATG4D Antibody - Additional Information

Gene ID 84971

Other Names

APG4D; AUTL4; Cysteine protease ATG4D; AUT-like 4 cysteine endopeptidase; Autophagin-4; Autophagy-related cysteine endopeptidase 4; Autophagy-related protein 4 homolog D

Target/Specificity

Recognizes endogenous levels of ATG4D protein.

Dilution

WB~~WB (1/500 - 1/1000), IH (1/50 - 1/100), IP (1/10 - 1/100)

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

Anti-ATG4D Antibody - Protein Information

Name ATG4D {ECO:0000303|PubMed:19549685, ECO:0000312|HGNC:HGNC:20789}

Function

[Cysteine protease ATG4D]: 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). 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). ATG4D plays a role in the autophagy-mediated neuronal homeostasis in the central nervous system (By similarity). Compared to other members of the family (ATG4A, ATG4B or ATG4C), constitutes the major protein for the delipidation activity, while it promotes weak proteolytic activation of ATG8 proteins (By similarity). 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

[Cysteine protease ATG4D]: Cytoplasm

Tissue Location

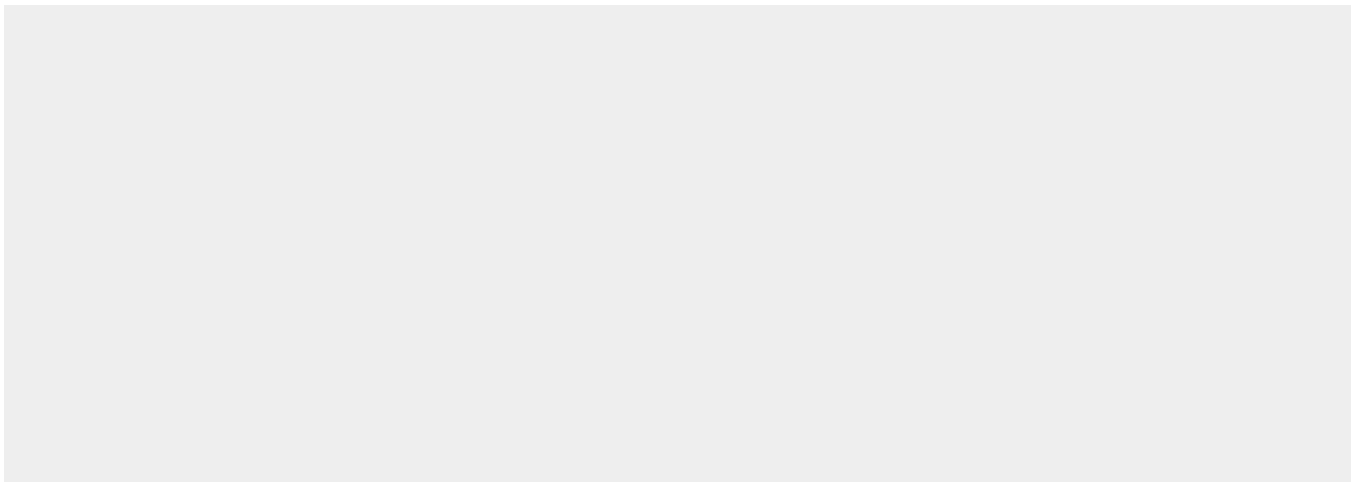
Widely expressed in testis.

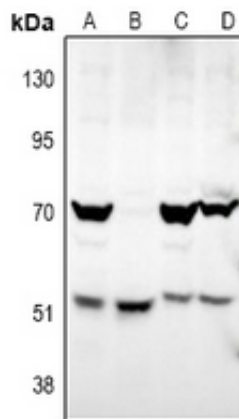
Anti-ATG4D Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

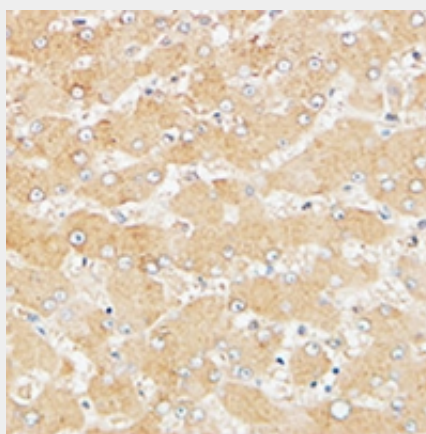
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ATG4D Antibody - Images





Western blot analysis of ATG4D expression in HeLa (A), A549 (B), PC12 (C), CT26 (D) whole cell lysates.



Immunohistochemical analysis of ATG4D staining in human liver 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.

Anti-ATG4D Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ATG4D. The exact sequence is proprietary.