



Rabbit Anti-ATG4D antibody

SL4009R

Product Name:	ATG4D
Chinese Name:	自噬相关蛋白4D抗体
Alias:	9830134P12Rik; APG4 autophagy 4 homolog D; APG4 D; APG4, <i>S. cerevisiae</i> , homolog of, D; APG4D; ATG4 autophagy related 4 homolog D (<i>S. cerevisiae</i>); Atg4d; ATG4D_HUMAN; Atg4dl; AUT like 4 cysteine endopeptidase; AUT-like 4 cysteine endopeptidase; AUTL4; Autophagin 4; Autophagin-4; autophagy 4, <i>S. cerevisiae</i> , homolog of, D; autophagy related 4D, cysteine peptidase; Autophagy related cysteine endopeptidase 4; Autophagy related protein 4 homolog D; Autophagy-related cysteine endopeptidase 4; Autophagy-related protein 4 homolog D; Cysteine protease ATG4D; Cysteine protease involved in autophagy; MGC31226.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	52kDa
Cellular localization:	cytoplasmic Mitochondrion
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human ATG4D:381-474/474
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Autophagy is the process by which endogenous proteins and damaged organelles are destroyed intracellularly. Autophagy is postulated to be essential for cell homeostasis and cell remodeling during differentiation, metamorphosis, non-apoptotic cell death, and aging. Reduced levels of autophagy have been described in some malignant tumors, and a role for autophagy in controlling the unregulated cell growth linked to cancer has been proposed. This gene belongs to the autophagy-related protein 4 (Atg4) family of C54 endopeptidases. Members of this family encode proteins that play a role in the biogenesis of autophagosomes, which sequester the cytosol and organelles for degradation by lysosomes. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

Function:

Cysteine protease ATG4D: Cysteine protease required for the cytoplasm to vacuole transport (Cvt) and autophagy. Cleaves the C-terminal amino acid of ATG8 family proteins MAP1LC3 and GABARAPL2, 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. Has also an activity of delipidating enzyme for the PE-conjugated forms. Cysteine protease ATG4D, mitochondrial: Plays a role as an autophagy regulator that links mitochondrial dysfunction with apoptosis. The mitochondrial import of ATG4D during cellular stress and differentiation may play important roles in the regulation of mitochondrial physiology, ROS, mitophagy and cell viability.

Product Detail:

Subcellular Location:

Cysteine protease ATG4D: Cytoplasm.

Cysteine protease ATG4D, mitochondrial: Cytoplasm. Mitochondrion matrix.

Note=Imported into mitochondrial matrix after cleavage by CASP3 during oxidative stress and cell death.

Tissue Specificity:

Mainly expressed in skeletal muscle and, to a lower extent, in testis.

Post-translational modifications:

Cleaved by CASP3 during apoptosis which leads to increased activity. The cleavage by CASP3 reveals a cryptic mitochondrial targeting sequence immediately downstream of their canonical caspase cleavage sites which leads to mitochondrial import of the protein.

Similarity:

Belongs to the peptidase C54 family.

SWISS:

Q86TL0

Gene ID:

84971

Database links:

[Entrez Gene: 84971](#)Human

[Entrez Gene: 235040](#)Mouse

[Entrez Gene: 100141400](#)Pig

[Entrez Gene: 686505](#)Rat

[Omin: 611340](#)Human

[SwissProt: Q86TL0](#)Human

[SwissProt: Q8BGV9](#)Mouse

[SwissProt: Q684M2](#)Pig

[Unigene: 512799](#)Human

[Unigene: 440165](#)Mouse

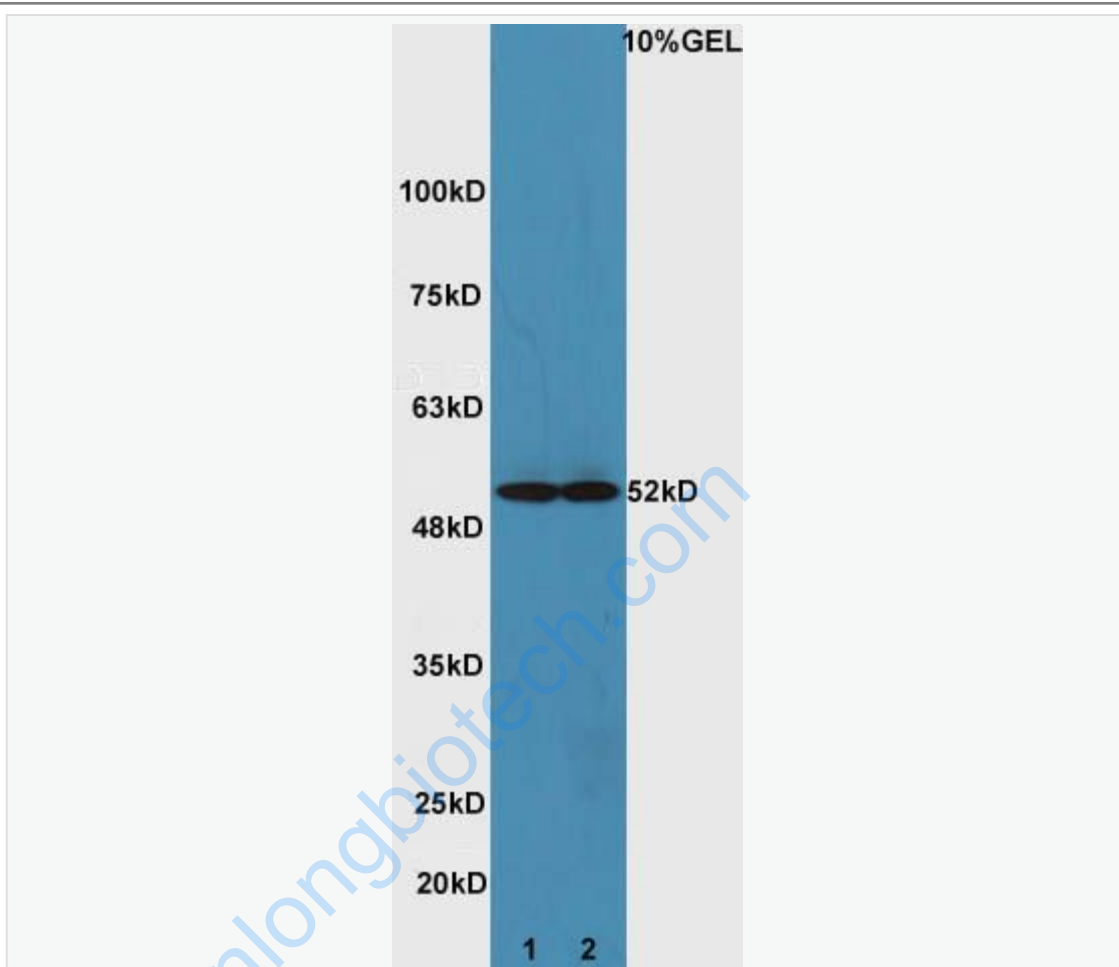
[Unigene: 202643](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Picture:



Sample:

Heart (Mouse) Lysate at 40 ug

Brain (Mouse) Lysate at 40 ug

Primary: Anti- ATG4D (SL4009R) at 1/300 dilution

Secondary: HRP conjugated Goat-Anti-rabbit IgG (SL4009R) at 1/5000 dilution

Predicted band size: 52 kD

Observed band size: 52 kD