

ATG3 Antibody (C-term K183)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1807c

Specification

ATG3 Antibody (C-term K183) - Product Information

Application	WB,E
Primary Accession	O9NT62
Other Accession	Q0VCL3
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	168-197

ATG3 Antibody (C-term K183) - Additional Information

Gene ID 64422

Other Names

Ubiquitin-like-conjugating enzyme ATG3, 632-, Autophagy-related protein 3, APG3-like, hApg3, Protein PC3-96, ATG3, APG3, APG3L

Target/Specificity

This ATG3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 168-197 amino acids from the C-terminal region of human ATG3.

Dilution

WB~~1:1000

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

ATG3 Antibody (C-term K183) is for research use only and not for use in diagnostic or therapeutic procedures.

ATG3 Antibody (C-term K183) - Protein Information

Name ATG3

Synonyms APG3, APG3L

Function E2 conjugating enzyme required for the cytoplasm to vacuole transport (Cvt), autophagy, and mitochondrial homeostasis. Responsible for the E2-like covalent binding of phosphatidylethanolamine to the C- terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A). The ATG12-ATG5 conjugate plays a role of an E3 and promotes the transfer of ATG8-like proteins from ATG3 to phosphatidylethanolamine (PE). This step is required for the membrane association of ATG8-like proteins. The formation of the ATG8-phosphatidylethanolamine conjugates is essential for autophagy and for the cytoplasm to vacuole transport (Cvt). Preferred substrate is MAP1LC3A. Also acts as an autocatalytic E2-like enzyme, catalyzing the conjugation of ATG12 to itself, ATG12 conjugation to ATG3 playing a role in mitochondrial homeostasis but not in autophagy. ATG7 (E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with ATG3. Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway.

Cellular Location

Cytoplasm.

Tissue Location

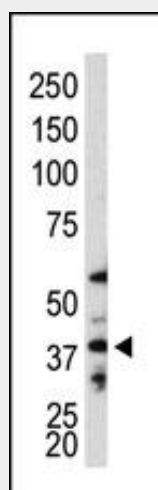
Widely expressed, with a highest expression in heart, skeletal muscle, kidney, liver and placenta

ATG3 Antibody (C-term K183) - 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](#)

ATG3 Antibody (C-term K183) - Images



Human APG3L was detected using purified polyclonal antibody AP1807c in Western blot on mouse colon tissue lysate.

ATG3 Antibody (C-term K183) - Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole).

APG3L is an E2-like conjugating enzyme facilitating covalent binding of APG8 (MAP1LC3) to phosphatidylethanolamine (PE). APG7 (an E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with APG3. Formation of the PE conjugate is essential for autophagy.

ATG3 Antibody (C-term K183) - References

Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005)
Greenberg JT. Dev Cell. 8(6):799-801. (2005)
Levine B. Cell. 120(2):159-62. (2005)
Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)

ATG3 Antibody (C-term K183) - Citations

- [ATG12 deficiency leads to tumor cell oncosis owing to diminished mitochondrial biogenesis and reduced cellular bioenergetics.](#)
- [Human non-small cell lung cancer cells can be sensitized to camptothecin by modulating autophagy.](#)
- [ATG12 conjugation to ATG3 regulates mitochondrial homeostasis and cell death.](#)