

ATG3 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1807a

Specification

ATG3 Antibody (N-term) - Product Information

Application	WB,E
Primary Accession	Q9NT62
Other Accession	Q6GOE7 , Q6AZ50 , Q9CPX6 , Q0VCL3
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	35864
Antigen Region	2-31

ATG3 Antibody (N-term) - Additional Information

Gene ID 64422

Other Names

Ubiquitin-like-conjugating enzyme ATG3, 632-, Autophagy-related protein 3, APG3-like, hAp3, Protein PC3-96, ATG3, APG3, APG3L

Target/Specificity

This ATG3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 2-31 amino acids from the N-terminal region of human ATG3.

Dilution

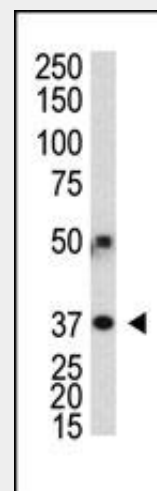
WB~1:1000

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.



Polyclonal antibody AP1807a was used in Western blot to detect human APG3L in transfected 293 cells.

ATG3 Antibody (N-term) - 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.

Precautions

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

ATG3 Antibody (N-term) - 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 (N-term) - 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 (N-term) - 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 (N-term) - Citations

- [Cytoplasmic sirtuin 6 translocation mediated by p62 polyubiquitination plays a critical role in cadmium-induced kidney toxicity](#)