

Cleaved LC3A Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5519

Product Information

Application	WB, IF
Primary Accession	Q9H492
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	14 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Antigen Region	110~146
Other Names	Microtubule-associated proteins 1A/1B light chain 3A, Autophagy-related protein LC3 A, Autophagy-related ubiquitin-like modifier LC3 A, MAP1 light chain 3-like protein 1, MAP1A/MAP1B light chain 3 A, MAP1A/MAP1B LC3 A, Microtubule-associated protein 1 light chain 3 alpha, MAP1LC3A
Dilution	WB~~1:500 IF~~1:25
Target/Specificity	This Cleaved LC3A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 110~146 amino acids from human Cleaved LC3A.
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	Cleaved LC3A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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). MAP1A and MAP1B are

microtubule-associated proteins which mediate the physical interactions between microtubules and components of the cytoskeleton. These proteins are involved in formation of autophagosomal vacuoles (autophagosomes). MAP1A and MAP1B each consist of a heavy chain subunit and multiple light chain subunits. MAP1LC3a is one of the light chain subunits and can associate with either MAP1A or MAP1B. The precursor molecule is cleaved by APG4B/ATG4B to form the cytosolic form, LC3-I. This is activated by APG7L/ATG7, transferred to ATG3 and conjugated to phospholipid to form the membrane-bound form, LC3-II.

References

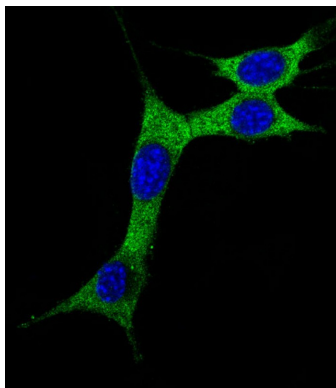
References for protein:

1. Baehrecke EH. *Nat Rev Mol Cell Biol.* 6(6):505-10. (2005)
2. Lum JJ, et al. *Nat Rev Mol Cell Biol.* 6(6):439-48. (2005)
3. Greenberg JT. *Dev Cell.* 8(6):799-801. (2005)
4. Levine B. *Cell.* 120(2):159-62. (2005)
5. Shintani T and Klionsky DJ. *Science.* 306(5698):990-5. (2004)
6. Tanida I., et al. *Int. J. Biochem. Cell Biol.* 36:2503-2518(2004)
7. He H., et al. *J. Biol. Chem.* 278:29278-29287(2003)
8. Tanida I., et al. *J. Biol. Chem.* 279:36268-36276(2004)

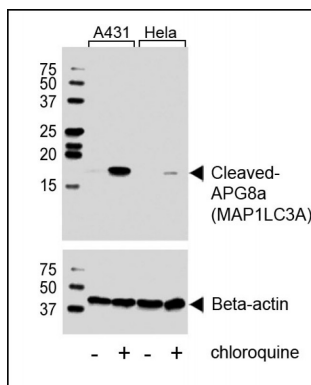
References for U251 cell line:

1. Westermarck B.; Pontén J.; Hugosson R. (1973). "Determinants for the establishment of permanent tissue culture lines from human gliomas". *Acta Pathol Microbiol Scand A.* 81:791-805. [PMID: 4359449].
2. Pontén, J., Westermarck B. (1978). "Properties of Human Malignant Glioma Cells in Vitro". *Medical Biology* 56: 184-193. [PMID: 359950].
3. Geng Y.; Kohli L.; Klocke B.J.; Roth K.A. (2010). "Chloroquine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent". *Neuro Oncol.* 12(5): 473-481. [PMID: 20406898].

Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblasts cell line) cells labeling Pdx1 with AW5519 at 1/25 dilution, followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (1583138) secondary antibody at 1/400 dilution (green). The nuclear counter stain is DAPI (blue). Immunofluorescence image showing cytoplasm on NIH/3T3 cell line.



Western blot analysis of lysates from A431, HeLa cell line, untreated or treated with chloroquine, using Cleaved-APG8a (MAP1LC3A)(Cat. #AW5519)(upper) or Beta-actin (lower).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.