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MAP1LC3 Antibody
Catalog # ASC11847

Specification

MAP1LC3 Antibody - Product Information

Application	**WB, IHC-P, E**
Primary Accession	Q9H492
Other Accession	NP_115903, 14210522
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 13 kDa** **Observed: 18 kDa KDa**
Application Notes	**MAP1LC3 antibody can be used for detection of MAP1LC3 by Western blot at 0.5 - 1 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL.**

MAP1LC3 Antibody - Additional Information

Gene ID **84557**

Target/Specificity
MAP1LC3A; MAP1LC3 antibody is human, mouse and rat reactive. Multiple isoforms MAP1LC3 are known to exist. MAP1LC3 antibody is predicted to detect MAP1LC3A, MAP1LC3B, and MAP1LC3C.

Reconstitution & Storage
MAP1LC3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
MAP1LC3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MAP1LC3 Antibody - Protein Information

Name MAP1LC3A

Function
Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes) (PubMed:20713600, PubMed:24290141). While LC3s are involved in elongation of the phagophore membrane, the GABARAP/GATE-16 subfamily is essential for a later stage in autophagosome maturation (PubMed:20713600). Through its interaction with the reticulophagy receptor TEX264, participates in the remodeling of subdomains of the endoplasmic reticulum into autophagosomes upon nutrient stress, which then fuse with lysosomes for endoplasmic reticulum turnover (PubMed:<a

href="http://www.uniprot.org/citations/31006537" target="_blank">31006537, PubMed:31006538).

Cellular Location
Cytoplasmic vesicle, autophagosome membrane; Lipid-anchor. Endomembrane system; Lipid-anchor. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q91VR7}. Note=LC3-II binds to the autophagic membranes.

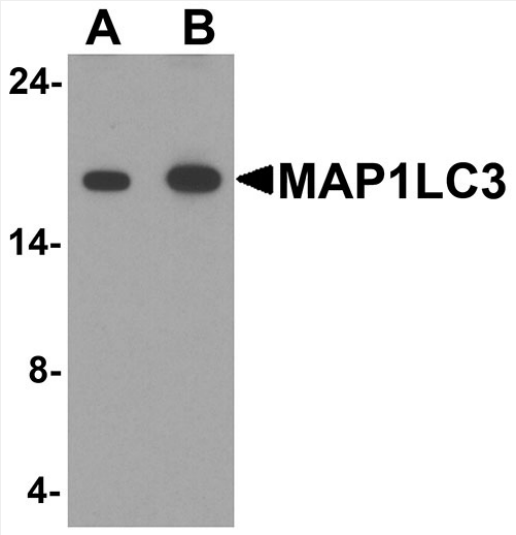
Tissue Location
Most abundant in heart, brain, liver, skeletal muscle and testis but absent in thymus and peripheral blood leukocytes

MAP1LC3 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 Cytomety
- Cell Culture

MAP1LC3 Antibody - Images



Western blot analysis of MAP1LC3 in human brain tissue lysate with MAP1LC3 antibody at (A) 1 and (B) 2 µg/ml.

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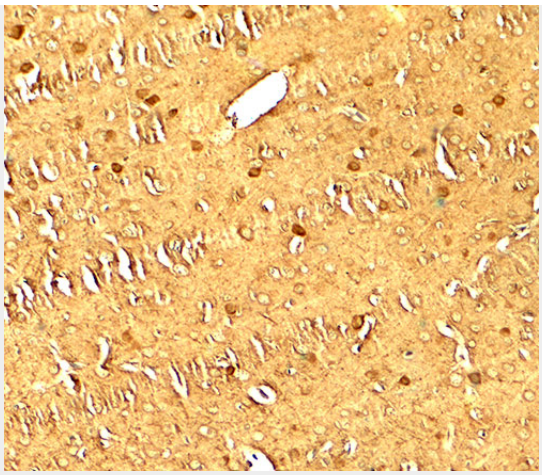

Immunohistochemistry of MAP1LC3 in rat brain tissue with MAP1LC3 antibody at 5 µg/ml.

MAP1LC3 Antibody - Background

Microtubule-associated proteins (MAPs) regulate microtubule stability and play critical roles in neuronal development and plasticity (1). MAP1LC3 is a subfamily of three related proteins belonging to the MAP1 LC3 family and it includes MAP1LC3A, MAP1LC3B, and MAP1LC3C (2). MAP1LC3 is the mammalian homolog of yeast ATG8 and is essential for autophagy and associated with the autophagosome membranes after processing (3). The three isoforms exhibit distinct expression patterns and both MAP1LC3A and MAP1LC3B but not MAP1LC3B, are post-translationally modified, suggesting the three isoforms may have different physiological functions (4).

MAP1LC3 Antibody - References

Mandelkow E and Mandelkow EM. Microtubules and microtubule-associated proteins. Curr. Opin. Cell Biol. 1995; 7:72-81.
Fink JK, Jones SM, Esposito C, et al. Human microtubule-associated protein 1A (MAP1A) gene: genomic organization, cDNA sequence, and developmental and tissue-specific expression. Genomics 1996; 35:577-85.
Kabeya Y, Mizushima N, Ueno T, et al. LC3, a mammalian homolog of yeast Apg8p, is localized in autophagosome membrane after processing. EMBO J. 2000; 19:5720-8.
He H, Dang Y, Dai F, et al. Post-translational modifications of three members of the human MAP1LC3 family and detection of a novel type of modification for MAP1LC3B. J. Biol. Chem. 2003; 278:29278-87.