

**MAP1LC3A Antibody**  
**Catalog # ASC11726****Specification****MAP1LC3A Antibody - Product Information**

|                   |  |
|-------------------|--|
| Application       | WB, IHC-P, IF, E   |
| Primary Accession | <a href="#">Q9H492</a>   |
| Other Accession   | <a href="#">NP_852610, 31563518</a>  |
| Reactivity        | Human  |
| Host              | Rabbit   |
| Clonality         | Polyclonal   |
| Isotype           | IgG  |
| Calculated MW     | Predicted: 14 kDa  |
| Application Notes | <p><b>Observed: 21 kDa</b></p> <p><b>MAP1LC3A antibody can be used for detection of MAP1LC3A by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.</b></p> |

**MAP1LC3A Antibody - Additional Information**

|                          |   |
|--------------------------|---|
| Gene ID                  | <b>84557</b>  |
| Target/Specificity       | MAP1LC3A; MAP1LC3A antibody is human specific. At least two isoforms of MAP1LC3A are known to exist. MAP1LC3A antibody is predicted to not cross-react with MAP1LC3B or MAP1LC3C. |
| Reconstitution & Storage | MAP1LC3A antibody can be stored at 4°C for three months and -20°C, stable for up to one year.   |

**Precautions**

MAP1LC3A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**MAP1LC3A Antibody - Protein Information****Name** MAP1LC3A**Function**

Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes) (PubMed:<a href="http://www.uniprot.org/citations/20713600" target="\_blank">20713600</a>, PubMed:<a href="http://www.uniprot.org/citations/24290141" target="\_blank">24290141</a>). 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:<a href="http://www.uniprot.org/citations/20713600" target="\_blank">20713600</a>). 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</a>, PubMed:<a href="http://www.uniprot.org/citations/31006538" target="\_blank">31006538</a>).

#### 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

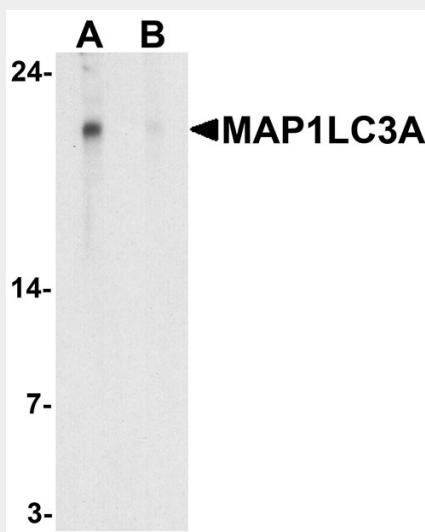
Most abundant in heart, brain, liver, skeletal muscle and testis but absent in thymus and peripheral blood leukocytes

#### MAP1LC3A Antibody - Protocols

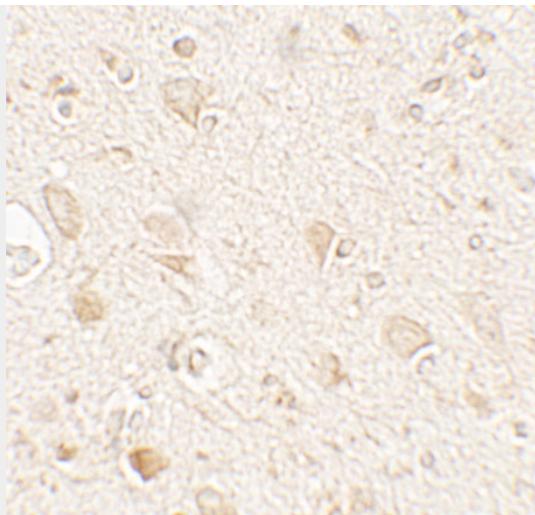
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

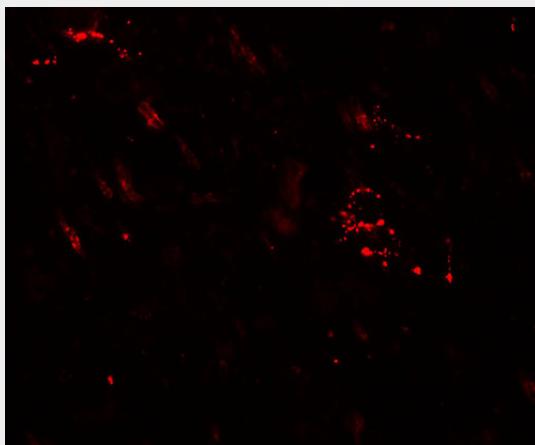
#### MAP1LC3A Antibody - Images



Western blot analysis of MAP1LC3A in HeLa cell lysate with MAP1LC3A antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of MAP1LC3A in human brain tissue with MAP1LC3A antibody at 5 µg/mL.



Immunofluorescence of MAP1LC3A in human brain tissue with MAP1LC3A antibody at 20 µg/mL.

#### **MAP1LC3A Antibody - Background**

Microtubule-associated proteins (MAPs) regulate microtubule stability and play critical roles in neuronal development and plasticity (1). MAP1LC3A belongs to the MAP1 LC3 family of proteins that form mature complexes with MAP1A and MAP1B which are thought to be important in the formation and development of axons and dendrites (2). MAP1LC3A is one of three isoforms of MAP1LC3, the mammalian homolog of yeast ATG8, an essential autophagy protein. These isoforms exhibit distinct expression patterns and MAP1LC3A, like MAP1LC3B but not MAP1LC3B, is post-translationally modified, suggesting the three isoforms may have different physiological functions (3).

#### **MAP1LC3A Antibody - References**

- Mandelkow E and Mandelkow EM. Microtubules and microtubule-associated proteins. *Curr. Opin. Cell Biol.* 1995; 7:72-81.
- Halpain S and Dehmelt L. The MAP1 family of microtubule-associated proteins. *Genome Biol.* 2006; 7:224.
- 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.