10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MAP1LC3C Antibody

Catalog # ASC11728

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9BXW4
Other Accession	NP_001004343, 51972260
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	16852
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MAP1LC3C antibody can be used for detection of MAP1LC3C by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	440738
Other Names	Microtubule-associated proteins 1A/1B light chain 3C, Autophagy-related protein LC3 C, Autophagy-related ubiquitin-like modifier LC3 C, MAP1 light chain 3-like protein 3, MAP1A/MAP1B light chain 3 C, MAP1A/MAP1B LC3 C, Microtubule-associated protein 1 light chain 3 gamma, MAP1LC3C
Target/Specificity	MAP1LC3C; MAP1LC3C antibody is human, mouse and rat reactive. Multiple isoforms MAP1LC3C are known to exist. MAP1LC3C antibody is predicted to not cross-react with MAP1LC3A or MAP1LC3B.
Reconstitution & Storage	MAP1LC3C antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	MAP1LC3C Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP1LC3C
Function	Ubiquitin-like modifier that plays a crucial role in antibacterial autophagy (xenophagy) through the selective binding of CALCOCO2 (PubMed:23022382). Recruits all ATG8 family members to infecting bacteria such as S.typhimurium (PubMed:23022382). May also play a role in aggrephagy, the macroautophagic degradation of ubiquitinated and aggregated proteins (PubMed:28404643).

Cellular Location	Cytoplasmic vesicle, autophagosome membrane; Lipid-anchor. Endomembrane system; Lipid-anchor. Cytoplasm, cytoskeleton. Note=LC3-II binds to the autophagic membranes.
Tissue Location	Most abundant in placenta, lung and ovary.

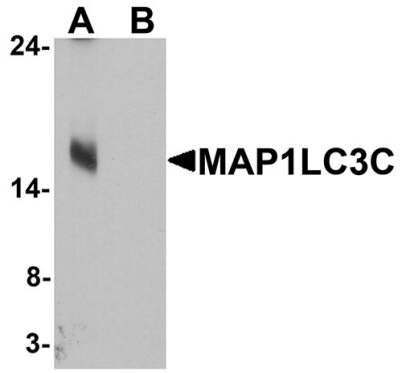
Background

Microtubule-associated proteins (MAPs) regulate microtubule stability and play critical roles in neuronal development and plasticity (1). MAP1LC3C 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). MAP1LC3C is one of three isoforms of MAP1LC3, the mammalian homolog of yeast ATG8, an essential autophagy protein. These isoforms exhibit distinct expression patterns and MAP1LC3C, like MAP1LC3A but not MAP1LC3B, is post-translationally modified, suggesting the three isoforms may have different physiological functions (3).

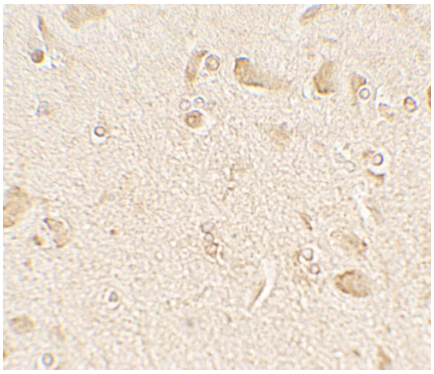
References

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.

Images

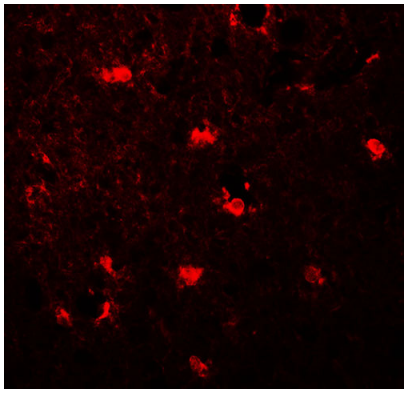


Western blot analysis of MAP1LC3C in human brain tissue lysate with MAP1LC3C antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of MAP1LC3C in human brain tissue with MAP1LC3C antibody at 5 µg/mL.

Immunofluorescence of MAP1LC3C in human brain tissue with MAP1LC3C antibody at 20 µg/mL.



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