

MAP LC3 α (R-23): sc-134226

BACKGROUND

Microtubule-associated proteins (MAPs) regulate microtubule stability and play critical roles in neuronal development and in maintaining the balance between neuronal plasticity and rigidity. MAP-light chain 3 β (MAP-LC3 β) and MAP-light chain 3 α (MAP-LC3 α), both of which are mammalian homologs of yeast Apg8, are subunits that can associate with either MAP-1A or MAP-1B. While MAP-LC3 β is essential for autophagy and is associated with autophagosome membranes after processing, MAP LC3 α is involved in the formation of autophagosomal vacuoles and is localized to the intracytoplasmic membrane. MAP LC3 α is expressed as two alternatively spliced isoforms that are expressed in testis, brain, heart, liver and skeletal muscle, but are absent in thymus and peripheral blood leukocytes.

REFERENCES

1. Mann, S.S. and Hammarback, J.A. 1996. Gene localization and developmental expression of light chain 3: a common subunit of microtubule-associated protein 1A (MAP-1A) and MAP-1B. *J. Neurosci. Res.* 43: 535-544.
2. Bonnet, C., et al. 2001. Differential binding regulation of microtubule-associated proteins MAP-1A, MAP-1B, and MAP-2 by tubulin polyglutamylation. *J. Biol. Chem.* 276: 12839-12848.

CHROMOSOMAL LOCATION

Genetic locus: MAP1LC3A (human) mapping to 20q11.22; Map1lc3a (mouse) mapping to 2 H1.

SOURCE

MAP LC3 α (R-23) is a Protein G purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of MAP LC3 α of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MAP LC3 α (R-23) is recommended for detection of MAP LC3 α of mouse, rat, human, zebrafish and bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MAP LC3 α siRNA (h): sc-106197, MAP LC3 α siRNA (m): sc-149251, MAP LC3 α shRNA Plasmid (h): sc-106197-SH, MAP LC3 α shRNA Plasmid (m): sc-149251-SH, MAP LC3 α shRNA (h) Lentiviral Particles: sc-106197-V and MAP LC3 α shRNA (m) Lentiviral Particles: sc-149251-V.

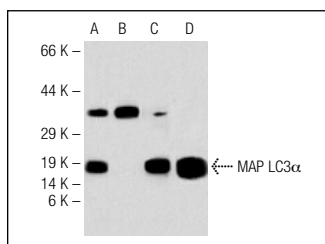
Molecular Weight of MAP LC3 α isoforms: 15/18 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or human brain tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MAP LC3 α (R-23): sc-134226. Western blot analysis of MAP LC3 α expression in human brain tissue extract in the absence (A) and the presence (B) of immunizing peptide, mouse brain (C) tissue extract and rat brain (D) tissue extract.

SELECT PRODUCT CITATIONS

1. Duan, W., et al. 2010. Silibinin induced autophagic and apoptotic cell death in HT1080 cells through a reactive oxygen species pathway. *J. Pharmacol. Sci.* 113: 48-56.
2. Margalef, P., et al. 2012. A truncated form of IKK α is responsible for specific nuclear IKK activity in colorectal cancer. *Cell Rep.* 2: 840-854.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **MAP LC3 α / β (G-4): sc-398822**, our highly recommended monoclonal alternative to MAP LC3 α (R-23). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MAP LC3 α / β (G-4): sc-398822**.