MAP LC3β (G-2): sc-271625

**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 3β (MAP LC3β) and MAP-light chain 3α (MAP LC3α) are subunits of both MAP1A and MAP1B. MAP LC3β, a homolog of Apg8p, is essential for autophagy and associated to the autophagosome membranes after processing. Two forms of LC3β, the cytosolic LC3-I and the membrane-bound LC3-II, are produced posttranslationally. LC3-I is formed by the removal of the C-terminal 22 amino acids from newly synthesized LC3β, followed by the conversion of a fraction of LC3-I into LC3-II. LC3 enhances Fibronectin mRNA translation in ductus arteriosus cells through association with 60S ribosomes and binding to an AU-rich element in the 3′ untranslated region of Fibronectin mRNA. This facilitates sorting of Fibronectin mRNA onto rough endoplasmic reticulum and translation. MAP LC3β may also be involved in formation of autophagosomal vacuoles. It is expressed primarily in heart, testis, brain and skeletal muscle.

**CHROMOSOMAL LOCATION**

Genetic locus: MAP1LC3B (human) mapping to 16q24.2, MAP1LC3B2 (human) mapping to 1q5roller, rat and human origin. Western blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MAP LC3β (G-2) is also recommended for detection of MAP LC3β and MAP LC3β2 in additional species, including canine, bovine and porcine.

**APPLICATIONS**

MAP LC3β (G-2) is recommended for detection of MAP LC3β and MAP LC3β2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

**Molecular Weight of MAP LC3β:** 15 kDa.

**Positive Controls:** Neuro-2A whole cell lysate: sc-364185, C6 whole cell lysate: sc-364373 or rat brain extract: sc-2392.

**SOURCE**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAP LC3β (G-2) is available conjugated to agarose (sc-271625 AC), 500 µg/ml, for IF, IHC(P) and FCM.

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**STORAGE**

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

**DATA**

**MAP LC3β (G-2): sc-271625. Western blot analysis of MAP LC3β expression in Neuro-2A (A) and C6 (B). whole cell lysates and mouse postnatal brain (C) and rat brain (D) tissue extracts.**

**MAP LC3β (G-2): sc-271625. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal and glial cells.**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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