

Mouse Monoclonal Antibody to

LC3 (microtubule-associated protein1 light chain 3B) clone 5F10 biotinylated

Order No.: 0231-100BIOTIN/LC3-5F10
Size (µg) 100
Lot No.: 0231S



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07/040808F

| Isotype | Species Reactivity | Applications | Mol. Weight | Ref.Cell Line | Epitope | Immunogen |
|---------|---------------------------------|--------------|------------------------------|---------------|---------------------|--|
| IgG1 | human, mouse, rat, dog, hamster | ICC, WB | LC3-I: 18kDa LC3-II:16kDa | Neuro 2A | N-terminus of LC3-B | synthetic peptide conjugated to hemocyanin |

Background and Specificity:

Autophagy is an alternative process of proteasomal degradation for some long-lived proteins or organelles. Alterations in the autophagic-lysosomal compartment have been linked to neuronal death in many neurodegenerative disorders as well as in transmissible neuronal pathologies (prion diseases). Genetic studies in yeast have shown that Autophagy-defective Gene-8 (Atg-8) represents a specific marker for autophagy. Among the four families of mammalian Atg8-related proteins only LC3 (microtubule-associated protein1 light chain 3) is expressed at sufficient high levels and efficiently recruited to autophagic vesicles in cells and tissues. During autophagy the cytoplasmic form, LC3-I is processed and recruited to autophagosomes, where LC3-II is generated by site specific proteolysis near to the C-terminus. Autophagic vacuoles have been also reported frequently in cardiomyopathies or muscle cells exposed to different experimental settings.

Mab LC3-5F10 specifically recognizes both forms of endogenous LC3, the cytoplasmic LC3-I (18 kDa) as well as the lipidated form generated during autophagosome and autophagolysosome formation: LC3-II (16 kDa). Immunocytochemical staining of cells with LC3-5F10 mab reveals the specific punctate distribution of endogenous LC3-II as a hallmark of autophagic activity.

NOTE: We strongly recommend to use PVDF membranes for immunoblot analysis.

Related Products

mab to LC3

#0260-100/LC3-2G6

mab to LC3

#0261-100/LC3-5H3

mab to Beclin

#0240-100/Beclin-12B4

Alzheimer Disease

mab to βA4 (1-40), C-Terminus

#0060-100/bA4(40)-5C3

mab to βA4 (1-42), C-Terminus

#0061-100/bA4(42)-8G7

mab to βA4 (1-40/42), C-Terminus

#0062-100/bA4(40/42)-9F1

mab to βA4 (1-43), C-Terminus

#0095-100/bA4(43)-6G12

mab to βA4, N-Terminus

#0064-100/bA4N-19H5

mab to βA4, N-Terminus

#0084-100/bA4N-19H11

mab to βA4, N-Terminus

#0197-100/bA4N-11H3

For monoclonal antibodies against PKB/akt, and SAPK/jnk, please refer to our website at www.nanotools.de

| | |
|-----------------------------|---|
| Purification: | The antibody was purified from serum-free cell culture supernatant by subsequent ultrafiltration and size exclusion chromatography. |
| Formulation: | liquid in PBS / 0.09 % Na-azide / PEG and Sucrose. |
| Reconstitution: | |
| Stability: | Aliquote and freeze in liquid nitrogen; antibody can be stored frozen at -80°C up to 1 year. Thaw aliquots at 37°C. Thawed aliquots may be stored at 4°C up to 3 months. Avoid repeated freeze / thaw cycles |
| Positive Control: | #0911: Cell lysate from untreated Neuro 2A |
| Immunoblotting: | 0.5 µg/ml for HRPO/ECL detection Recommended blocking buffer: Casein/Tween 20 based blocking and blot incubation buffer, e.g. nanoTools product #3031-500/CPPT or #3031-3000/CPPT. |
| Immunoprecipitation: | ND |
| Immunocytochemistry: | Use at 1- 10 µg/ml (paraformaldehyd/methanol fixation) |
| ELISA: | ND |

All products are supplied for research and investigational use only. Not for use in humans or laboratory animals.