LC3B monoclonal antibody (5F10)

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.

This antibody is covered by our Worry-Free Guarantee.

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Ordering Information

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ALX-803-080-C100	100µg

Manuals, SDS & CofA

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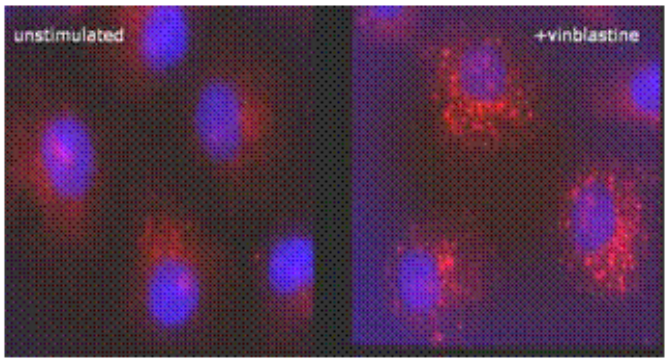


Figure 1: Endogenous LC3 punctae detected using MAb to LC3B (5F10) (Prod. No. ALX-803-080)**Method:** The majority of LC3 was diffusely localized in unstimulated COS-7 cells, wheres punctated signals of LC3 increase after induction of autophagy by vinblastin stimulation for 2h. Cells were fixed with paraformaldehyde followed by methanol treatment. Cells were permeabilized with 0.3% Triton X-100. (Image courtesy of I. Ciechomska and A. Tolkovsky, University of Cambridge, UK.)

Handling & Storage

Use/Stability	Stable at -80°C up to 1 year, at 4°C up to 3 months.
Handling	Avoid freeze/thaw cycles. After reconstitution, prepare aliquots and freeze in liquid nitrogen.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Microtubule-associated protein 1 light chain 3B, MAP1LC3B
Application	ICC, WB
Application Notes	Detects a band of ~18kDa (LC3B-I; cytoplasmic form) and a band of ~16kDa (LC3B-II; lipidated form) by Western blot.
Clone	5F10
Formulation	Lyophilized from 1ml PBS containing PEG, sucrose, and 0.09% sodium azide.
Host	Mouse
Immunogen	Synthetic peptide corresponding to the N-terminus of LC3B conjugated to hemocyanin.
Isotype	IgG1
Positive Control	Included. (Prod. No. ALX-840-038)
Purity Detail	Purified from serum-free cell culture supernatant by subsequent ultrafiltration and size exclusion chromatography.

Recommendation Dilutions/Conditions	Immunocytochemistry (paraformaldehyde/methanol fixed cells; 1-10 µg/ml)Western Blot (0.5µg/ml for HRPO/ECL detection; recommended blocking buffer CPPT: 10mM TRIS-HCl, pH 7.4, 0.5% (w/v) casein, 1% (w/v) PEG 4000, 1% (w/v) polyvinylpyrrolidone, 0.1% (v/v) Tween 20, 150mM sodium chloride)We strongly recommend to use PVDF membranes for immunoblot analysis.Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Reconstitution	Reconstitute with 1ml water (15 minutes at room temperature).
Species Reactivity	Dog, Hamster, Human, Mouse, Rat
Specificity	Recognizes both forms of endogenous LC3B.
UniProt ID	Q9GZQ8
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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