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Product datasheet for AM20212PU-N

LC3B (MAP1LC3B) (N-term) (incl. pos. control) Mouse Monoclonal Antibody [Clone ID: 5F10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	5F10
Applications:	IF, WB
Recommended Dilution:	**Immunocytochemistry:** Use at 1-10 µg/ml (Paraformaldehyd/Methanol fixation) (See Ref.1) **Immunoblotting:** 0.5 µg/ml for HRPO/ECL detection *Recommended blocking buffer:* Casein/Tween 20 based blocking and blot incubation buffer. **We strongly recommend to use PVDF membranes for Immunoblot analysis.** ***Included Positive Control Cell Lysates:*** **Positive Control: Enriched cell fraction (LC3 I and LC3II) from PC3 cells,** **Format:** Lyophilized cell lysate from PC3 cells. **Reconstitution:** Restore by addition of 200 µl H_2O. After complete solubilization add 200 µl 2x SDS-PAGE sample buffer, mix and incubate at 90°C for 5 min. **Application:** The positive control cell lysate is recommended for immunoblot applications. 20 µl of positive control cell lysate correspond to ca. 20.000 cells. Use 20 µl/lane (mini gel) for HRPO/ECL detection of the target proteins. **Please NOTE:** The lyophilized cell lysates contains SDS and are not recommended for applications with native proteins such as in immunoprecipitation. **Storage:** Aliquote reconstituted product and store frozen. Avoid repeated fereezing and thawing.
Reactivity:	Canine, Hamster, Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Synthetic peptide - hemocyanin conjugated - derived from the N-terminus of LC3-B
Specificity:	This antibody 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 antibody Cat.-No AM20212PU-N (Clone 5F10) reveals the specific punctate distribution of endogenous LC3-II as a hallmark of autophagic activity.

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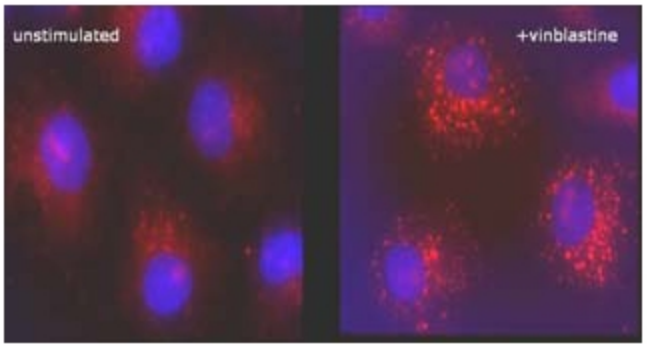
Formulation:	1ml PBS State: Purified State: Lyophilized purified IgG fraction Stabilizer: PEG and Sucrose Preservative: 0.09% Sodium Azide
Reconstitution Method:	Restore with 1ml H_2O (15 min, RT)
Purification:	Subsequent Ultrafiltration and Size Exclusion Chromatography
Conjugation:	Unconjugated
Storage:	Store lyophilized (preferably in a desiccator) at -20°C and reconstituted (aliquote and freeze in liquid nitrogen) at -80°C. Thaw aliquots at 37°C. Thawed aliquots may be stored at 4°C up to 3 months. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	18 kDa (LC3-I), 16 kDa (LC-II)
Gene Name:	microtubule associated protein 1 light chain 3 beta
Database Link:	Entrez Gene 64862 RatEntrez Gene 67443 MouseEntrez Gene 81631 Human Q9GZQ8
Background:	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.
Synonyms:	MAP1LC3B, MAP1A/MAP1B, Map1lc3b, Map1alc3, Map1lc3

Product images:



Endogenous LC-3 punctae detected with AM20212PU-N LC3 antibody (Clone 5F10): The majority of LC-3 was diffusely localized in unstimulated COS-7 cells, wheres punctated signals of LC-3 increase after induction of autophagy by vinblastin stimulation for 2 hr. Cells were fixed with paraformaldehyd followed by methanol treatment. Cells were permeabilized with 0.3% TritonX100. Endogenous LC-3 was detected with mab 5F10. Images by courtesy of I. Ciechomska and A. Tolkovsky, University of Cambridge, UK.