

LC3 (APG8B) (NT) Antibody

ALTERNATE NAMES: MAP1LC3B; MAP1ALC3; Microtubule-associated proteins 1A/1B light chain 3B; Autophagy-related protein LC3 B; Autophagy-related ubiquitin-like modifier LC3 B; MAP1 light chain 3-like protein 2; MAP1A/MAP1B light chain 3 B; Microtubule-associated protein 1 light chain 3 beta.

CATALOG #: 6946-100
AMOUNT: 100 µl
HOST/ISOTYPE: Rabbit Ig

IMMUNOGEN: This LC3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human.

INTERNAL ID: DM-17

MOLECULAR WEIGHT: ~14.3 kDa

FORM: Liquid

FORMULATION: In PBS with 0.09% (W/V) sodium azide.

PURIFICATION: This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

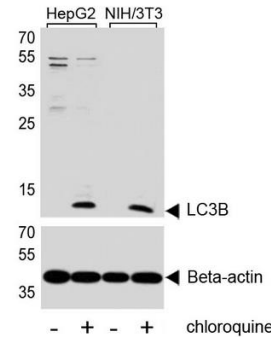
SPECIES REACTIVITY: Human, Rat. Predicted cross reactivity with bovine samples.

STORAGE CONDITIONS: Maintain refrigerated at 2-8°C for up to 6 months. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.

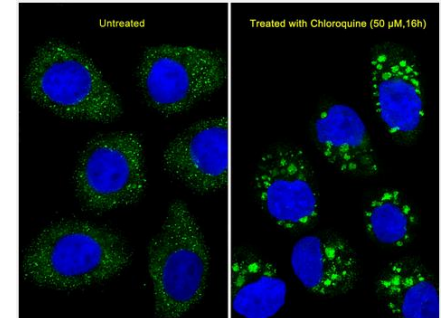
DESCRIPTION: Autophagy is an alternative process of proteasomal degradation for some long-lived proteins or organelles. Alterations in the autophagic-lysosomal compartment have been linked to neuronal death in many neurodegenerative disorders as well as in transmissible neuronal pathologies (prion diseases). 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.

APPLICATION: WB: 1:1000, IF: 1:100, IHC: 1:50-100.

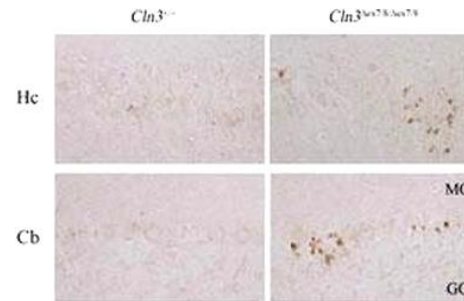
Note: This information is only intended as a guide. The optimal dilutions must be determined by the user.



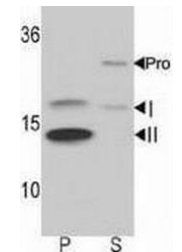
Western blot analysis of lysates from HepG2, mouse NIH/3T3 cell line, untreated or treated with chloroquine, 50µM, using LC3 Antibody (APG8B) (N-term) (upper) or Beta-actin (lower).



Immunofluorescent analysis of U251 cells, using LC3 Antibody (APG8B) (N-term). U251 cells (right) were treated with Chloroquine (50 µM, 16h). AP1802a was diluted at 1:25 dilution. Alexa Fluor 488-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue).



Wild-type (Cln3+/+) or homozygous Cln3Δex7/8 (Cln3Δex7/8/Δex7/8) paraffin-embedded brain sections immunostained for the LC3 protein with LC3 antibody. Shown are the CA2/CA3 region of hippocampus (Hc) and cerebellum (Cb) from 10-month-old mice. Few immunopositive puncta are present in wild-type sections, whereas homozygous Cln3Δex7/8 sections contain clusters of LC3-positive puncta around pyramidal neurons and Purkinje cells (P). MOL, molecular layer; GCL, granule cell layer. Data courtesy of Dr. Susan Cotman, MGH.



Western blot analysis of anti-LC3 (APG8b) Pab in rat brain lysate. Both non-lipidated (arrow, I) and lipidated LC3 (APG8b) (arrow, II) were detected in membrane fraction (P) but pro-LC3 (APG8b) and non-lipidated LC3 ((APG8b) were detected in soluble fraction (S).

RELATED PRODUCTS:

- LC3 (APG8) Antibody (Clone 166AT1234) (Cat # 3233-100)
- LC3 (APG8A) Antibody (Cat # 3235-100)
- LC3A cleaved Antibody (Cat # 6947-100)
- LC3 (APG8A) (NT) Antibody (Cat # 6948-100)
- LC3B cleaved (NT) Antibody (Cat # 6949-100)
- LC3 (APG8C) Antibody (Cat # 6950-100)
- Phospho LC3(S12) Antibody (Cat # 6951-100)

