

LC3 (APG8A) (NT) Antibody

ALTERNATE NAMES: MAP1LC3A; Microtubule-associated proteins 1A/1B light chain 3A; Autophagy-related protein LC3 A; Autophagy-related ubiquitin-like modifier LC3 A; MAP1 light chain 3-like protein 1; Microtubule-associated protein 1 light chain 3 alpha

CATALOG #: 6948-100

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-term of human LC3 (APG8a).

INTERNAL ID: DM-19

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.

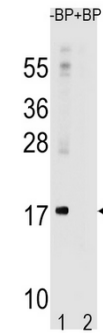
SPECIES REACTIVITY: Human, Mouse, Rat.

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.

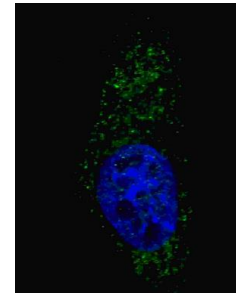
DESCRIPTION: Autophagy is an alternative process of proteasomal degradation for some long-lived proteins or organelles. Alterations in the autophagic-lysosomal compartment have been linked to neuronal death in many neurodegenerative disorders as well as in transmissible neuronal pathologies (prion diseases). 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: 1:200, 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 anti-LC3 (APG8a) Pab in rat brain lysate. Both lipidated (arrow, II) and non-lipidated APG8a (arrow, I) were detected in membrane fraction (P) but only non-lipidated LC3 was detected in soluble fraction (S).

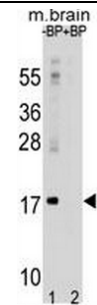


Fluorescent image of U251 cells stained with LC3 (APG8A) (N-term) antibody. U251 cells were treated with Chloroquine (50 µM, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with LC3 (APG8A) (N-term) primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). LC3 immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells.

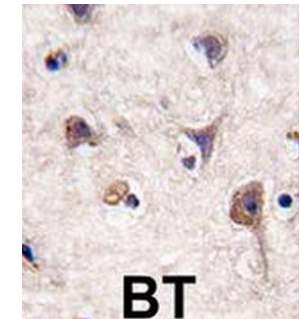
RELATED PRODUCTS:

- LC3 (APG8) Antibody (Clone 166AT1234) (Cat # 3233-100)
- LC3 (APG8A) Antibody (Cat # 3235-100)
- LC3 (APG8B) (NT) Antibody (Cat # 6946-100)
- LC3A cleaved Antibody (Cat # 6947-100)
- LC3B cleaved (NT) Antibody (Cat # 6949-100)
- LC3 (APG8C) Antibody (Cat # 6950-100)
- Phospho-LC3C(S12) Antibody (Cat # 6951-100)

For research use only



APG8a (MAP1LC3A) Antibody (M1) western blot analysis in mouse brain tissue lysates (35ug/lane). This demonstrates the APG8a (MAP1LC3A) antibody detected the APG8a (MAP1LC3A) protein (arrow).



Formalin-fixed and paraffin-embedded human brain tissue reacted with Autophagy LC3 Antibody (APG8a) (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.