

Datasheet for ABIN388464

anti-MAP1LC3A antibody (N-Term)**3** Images**24** Publications[Go to Product page](#)

Overview

Quantity:	400 µL
Target:	MAP1LC3A
Binding Specificity:	AA 1-30, N-Term
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MAP1LC3A antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

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).
Clone:	RB7609
Isotype:	Ig Fraction
Purification:	This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Target Details

Target:	MAP1LC3A
Alternative Name:	LC3 (MAP1LC3A Products)

Target Details

Background:	Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). MAP1A and MAP1B are microtubule-associated proteins which mediate the physical interactions between microtubules and components of the cytoskeleton. These proteins are involved in formation of autophagosomal vacuoles (autophagosomes). MAP1A and MAP1B each consist of a heavy chain subunit and multiple light chain subunits. MAP1LC3a is one of the light chain subunits and can associate with either MAP1A or MAP1B. The precursor molecule is cleaved by APG4B/ATG4B to form the cytosolic form, LC3-I. This is activated by APG7L/ATG7, transferred to ATG3 and conjugated to phospholipid to form the membrane-bound form, LC3-II.
Molecular Weight:	14272
Gene ID:	84557
NCBI Accession:	NP_115903 , NP_852610
UniProt:	Q9H492
Pathways:	Autophagy

Application Details

Application Notes:	IF: 1:200. WB: 1000. IHC-P: 1:50~100
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C

Handling

Storage Comment: 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.

Expiry Date: 6 months

Publications

Product cited in: Doucet-Beaupré, Gilbert, Profes, Chabrat, Pacelli, Giguère, Rioux, Charest, Deng, Laguna, Ericson, Perlmann, Ang, Cicchetti, Parent, Trudeau, Lévesque: "Lmx1a and Lmx1b regulate mitochondrial functions and survival of adult midbrain dopaminergic neurons." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 113, Issue 30, pp. E4387-96, (2018) ([PubMed](#)).

Lord, Farrugia, Yan, Vassie, Whitelock: "Hyaluronan coated cerium oxide nanoparticles modulate CD44 and reactive oxygen species expression in human fibroblasts." in: **Journal of biomedical materials research. Part A**, Vol. 104, Issue 7, pp. 1736-46, (2017) ([PubMed](#)).

Sumiyoshi, Ishitobi, Miyaki, Miyado, Adachi, Ochi: "The role of tetraspanin CD9 in osteoarthritis using three different mouse models." in: **Biomedical research (Tokyo, Japan)**, Vol. 37, Issue 5, pp. 283-291, (2017) ([PubMed](#)).

Paquet, Nicoll, Love, Mouton-Liger, Holmes, Hugon, Boche: "Downregulated apoptosis and autophagy after anti-A β immunotherapy in Alzheimer's disease." in: **Brain pathology (Zurich, Switzerland)**, (2017) ([PubMed](#)).

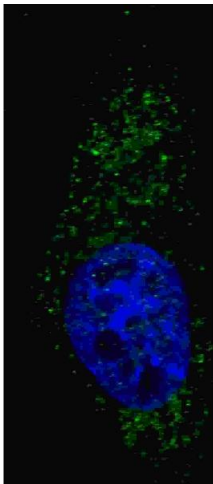
Chen, Akinyemi, Hase, Firbank, Ndungu, Foster, Craggs, Washida, Okamoto, Thomas, Polvikoski, Allan, Oakley, OBrien, Horsburgh, Ihara, Kalaria: "Frontal white matter hyperintensities, clasmotodendrosis and gliovascular abnormalities in ageing and post-stroke dementia." in: **Brain : a journal of neurology**, Vol. 139, Issue Pt 1, pp. 242-58, (2016) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



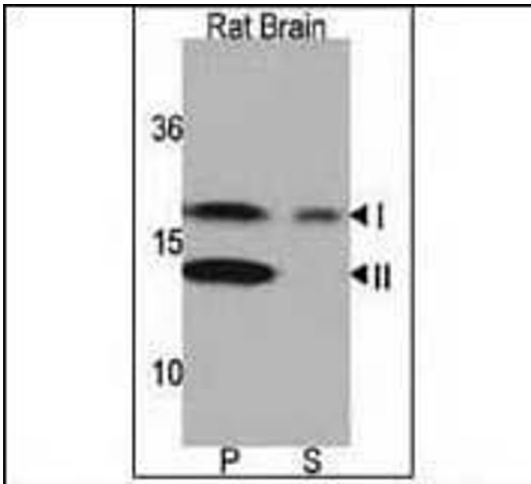
Immunohistochemistry (Paraffin-embedded Sections)

Image 1. Formalin-fixed and paraffin-embedded human brain tissue reacted with Autophagy LC3 Antibody (G8a) (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.



Immunofluorescence

Image 2. Fluorescent image of cells stained with (ABIN388464 and ABIN2849519) LC3 (G8A) (N-term) antibody. 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 (ABIN388464 and ABIN2849519) LC3 (G8A) (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 cells.



Western Blotting

Image 3. Western blot analysis of anti-LC3 (G8a) Pab 1801a in rat brain lysate. Both lipidated (arrow, II) and non-lipidated G8a (arrow, I) were detected in membrane fraction (P) but only non-lipidated LC3 was detected in soluble fraction (S).