Datasheet for ABIN6243032

anti-MAP1LC3A antibody (AA 30-56)

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Overview

Quantity:	400 µL
Target:	MAP1LC3A
Binding Specificity:	AA 30-56
Reactivity:	Human
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 30-56 amino acids from human LC3.
Clone:	RB11840
Isotype:	Ig Fraction
Predicted Reactivity:	Zf, B, M, Rat
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

Target Details

Target:	MAP1LC3A

Target Details

Alternative Name:	LC3 (MAP1LC3A Products)
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.
NCBI Accession:	NP_115903, NP_852610
UniProt:	Q9H492, Q9GZQ8
Pathways:	Autophagy

Application Details

Application Notes:	IF: 1:100. WB: 1:1000. IHC-P: 1:10~50
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
Expiry Date:	6 months

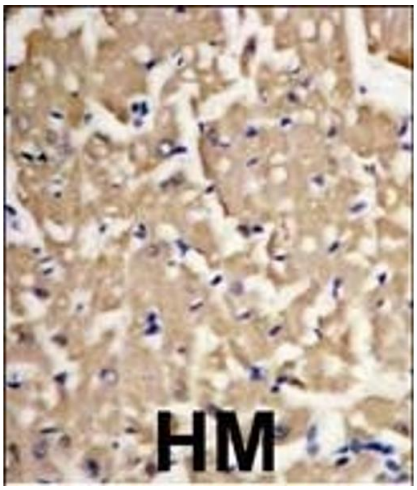
Publications

Product cited in:

Lu, Hsu: "Ambient temperature reduction extends lifespan via activating cellular degradation activity in an annual fish (Nothobranchius rachovii)." in: **Age (Dordrecht, Netherlands)**, Vol. 37, Issue 2, pp. 33, (2015) (PubMed).

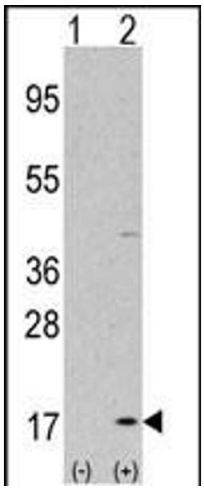
Hsu, Chuang, Chan: "Changes in cellular degradation activity in young and old worker honeybees (Apis mellifera)." in: **Experimental gerontology**, Vol. 50, pp. 128-36, (2014) (PubMed).

Images



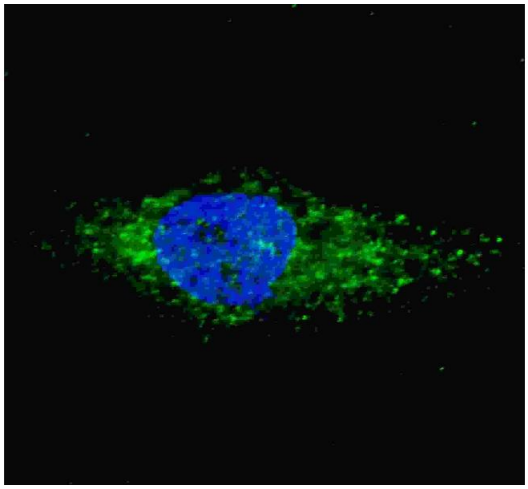
Immunohistochemistry (Paraffin-embedded Sections)

Image 1. Forlin-fixed and paraffin-embedded heart muscle tissue reacted with Autophagy LC3 G8a (M1LC3A) Antibody (P45) 1801b , 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.



Western Blotting

Image 2. Western blot analysis of LC3 (G8a) (arrow) using purified Pab 1801b. 293 cell lysates (2 µg/lane) either nontransfected (Lane 1) or transiently transfected with the LC3 (G8a) gene (Lane 2) (Origene Technologies).



Immunofluorescence

Image 3. Fluorescent image of cells stained with (ABIN6243032 and ABIN6577351) LC3 (G8A) (P45) 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 (ABIN6243032 and ABIN6577351) LC3 (G8A) (P45) primary antibody (1:100, 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.