Datasheet for ABIN388484

anti-LC3B antibody (cleaved)

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Overview

Quantity:	400 µL
Target:	LC3B (MAP1LC3B)
Binding Specificity:	AA 89-122, cleaved
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This LC3B antibody is un-conjugated
Application:	Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	This Cleaved LC3B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 89-122 amino acids from human Cleaved LC3B.
Clone:	RB15839-RB28608
Isotype:	Ig Fraction
Predicted Reactivity:	B
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

Target Details

Target:	LC3B (MAP1LC3B)
Alternative Name:	LC3B (MAP1LC3B 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. MAP1LC3b 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:	14688
Gene ID:	81631
NCBI Accession:	NP_073729
UniProt:	Q9GZQ8
Pathways:	Autophagy

Application Details

Application Notes:	IF: 1:100. IF: 1:10~50. ICC: 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

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:

Ock, Park, Han, Jeong, Kim, Lee, Hahm: "Genetic ablation or pharmacologic inhibition of autophagy mitigated NSAID-associated gastric damages." in: **Journal of molecular medicine (Berlin, Germany)**, Vol. 95, Issue 4, pp. 405-416, (2018) (PubMed).

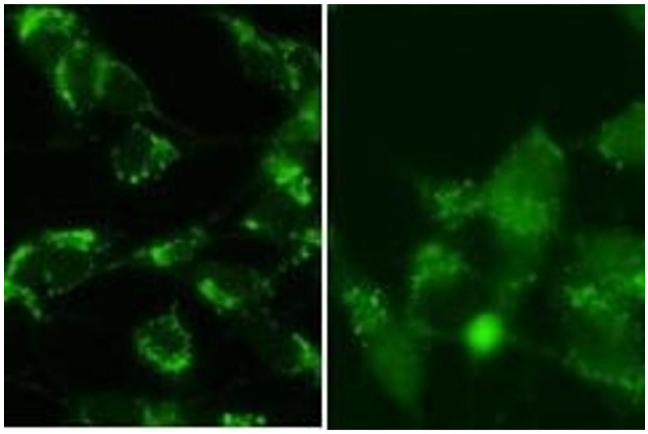
Xu, Huai, Meng, Dong, Liu, Qi, Hu, Fan, Jin, Lv: "L-3-n-Butylphthalide Activates Akt/mTOR Signaling, Inhibits Neuronal Apoptosis and Autophagy and Improves Cognitive Impairment in Mice with Repeated Cerebral Ischemia-Reperfusion Injury." in: **Neurochemical research**, Vol. 42, Issue 10, pp. 2968-2981, (2018) (PubMed).

Filipczak, Thomas, Chen, Salzman, McDonald, Lin, Belinsky: "TSC2 Deficiency Unmasks a Novel Necrosis Pathway That Is Suppressed by the RIP1/RIP3/MLKL Signaling Cascade." in: **Cancer research**, Vol. 76, Issue 24, pp. 7130-7139, (2017) (PubMed).

Lee, Park, Hahm: "Mitigated NSAID-induced apoptotic and autophagic cell death with Smad7 overexpression." in: **Journal of clinical biochemistry and nutrition**, Vol. 60, Issue 1, pp. 55-62, (2017) (PubMed).

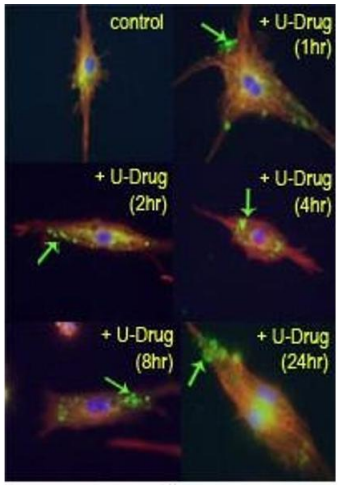
Jutten, Keulers, Schaaf, Savelkouls, Theys, Span, Vooijs, Bussink, Rouschop: "EGFR overexpressing cells and tumors are dependent on autophagy for growth and survival." in: **Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology**, Vol. 108, Issue 3, pp. 479-83, (2013) (PubMed).

There are more publications referencing this product on: Product page



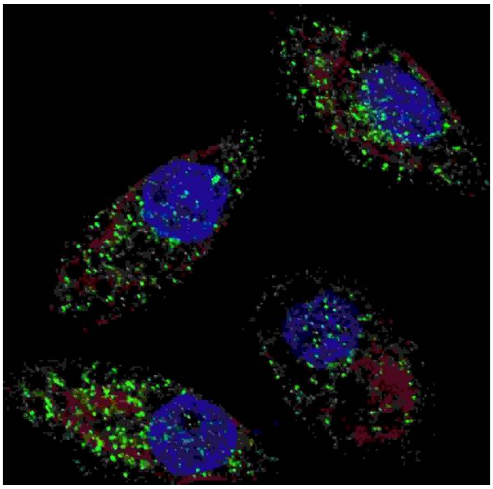
Immunocytochemistry

Image 1. SY5Y cells were pretreated with 5nM bafilomycin for 24hr and fixed in methanol (left panel) or 4 % of paraformaldehyde (right panel). Treatment with Cat (ABIN388484 and ABIN2849564) antibody at dilution 1:100. Data courtesy of Jianhui Zhu, MD, PhD & Charleen T. Chu, MD, PhD, University of Pittsburgh School of Medicine.



Immunofluorescence

Image 2. Time course study of mouse leukaemic monocyte macrophage cells treated with U18666A, a drug that causes cholesterol and lipid storage in cells, thereby blocking fusion between late endosomes and lysosomes. Cleaved-LC3 (G8b) antibody (Cat 1806a) detected punctuate staining indicative of autophagic vacuole or phagosome structures. Data courtesy of Dr. Barry Boland, Department of Pharmacology, Oxford University.



Immunofluorescence

Image 3. Fluorescent image of cells stained with cleaved LC3B antibody. cells were treated with Chloroquine (50 µ M,16h), then fixed with 4 % PFA (20 min), permeabilized with Triton X-100 (0.2 %, 30 min). Cells were then incubated with (ABIN388484 and ABIN2849564) cleaved LC3B 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.