

Rabbit APG8a/b (MAP1LC3A/B) Polyclonal Antibody | anti-MAP1LC3B antibody

APG8a/b (MAP1LC3A/B) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA290210	Rabbit	Human, mouse (Predicted Reactivity: Bovine)	Immunohistochemistry, Western Blot, ELISA, Immunofluorescence

PRODUCT SYNONYMS

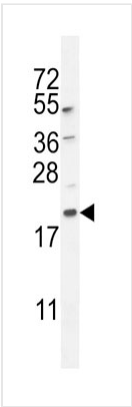
APG8a/b (MAP1LC3A/B); Polyclonal Antibody; APG8a/b (MAP1LC3A/B) Antibody; Microtubule-associated proteins 1A/1B light chain 3B; Autophagy-related protein LC3 B; Autophagy-related ubiquitin-like modifier LC3 B; MAP1 light chain 3-like protein 2; MAP1A/MAP1B light chain 3 B; MAP1A/MAP1B LC3 B; Microtubule-associated protein 1 light chain 3 beta; MAP1LC3B; MAP1ALC3; anti-MAP1LC3B antibody

PRODUCT SPECIFICATIONS

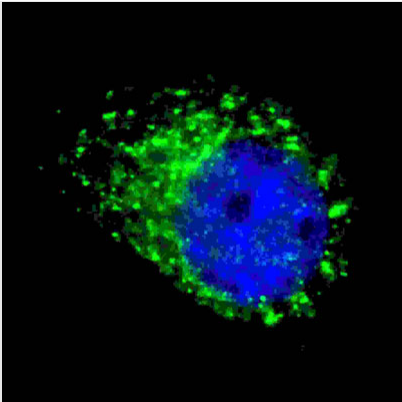
Host	Rabbit
Reactivity	Human, mouse (Predicted Reactivity: Bovine)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This Cleaved-APG8a/b antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 100-125 amino acids from human Cleaved-APG8a/b.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Sequence Positions	100-125
Sequence Length	125
Applicable Applications for anti-MAP1LC3B antibody	IHC (Immunohistochemistry), WB (Western Blot), ELISA, IF (Immunofluorescence)
Function	Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes). Plays a role in mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production (PubMed:). While LC3s are involved in elongation of the phagophore membrane, the GABARAP/GATE-16 subfamily is essential for a later stage in autophagosome maturation. Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway. Through its interaction with the reticulophagy receptor TEX264, participates in the remodeling of subdomains of the endoplasmic reticulum into autophagosomes upon nutrient stress, which then fuse with lysosomes for endoplasmic reticulum turnover (PubMed: , PubMed:31006537).
Cellular Location	Cytoplasm, cytoskeleton. Endomembrane system; Lipid- anchor. Cytoplasmic vesicle, autophagosome membrane; Lipid- anchor. Note=LC3-II binds to the autophagic membranes. LC3-II localizes with the mitochondrial inner membrane during Parkin-mediated mitophagy (PubMed:28017329). Localizes also to discrete punctae along the ciliary axoneme.
Tissue Location	Most abundant in heart, brain, skeletal muscle and testis. Little expression observed in liver
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.



IHC (Immunohistochemisry)
Cleaved-APG8a/b antibody (MAP1LC3A/B) immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the Cleaved-APG8a/b antibody (MAP1LC3A/B) for immunohistochemistry. Clinical relevance has not been evaluated.



WB (Western Blot)
APG8a/b (MAP1LC3A/B) western blot analysis in mouse lung tissue lysates (35ug/lane). This demonstrates the MAP1LC3A antibody detected the MAP1LC3A protein (arrow).



IF (Immunofluorescence)
Fluorescent image of U251 cells stained with APG8a/b (MAP1LC3A/B) antibody. U251 cells were treated with Chloroquine (50 uM, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AAA290210 APG8a/b (MAP1LC3A/B) 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 ug/ml, 5 min). APG8a/b (MAP1LC3A/B) immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells.

ADDITIONAL INFORMATION

Related Product Information for anti-MAP1LC3B antibody	The product of this gene is a subunit of neuronal microtubule-associated MAP1A and MAP1B proteins, which are involved in microtubule assembly and important for neurogenesis. Studies on the rat homolog implicate a role for this gene in autophagy, a process that involves the bulk degradation of cytoplasmic component.
Product Categories/Family for anti-MAP1LC3B antibody	Cancer; Cardiovascular; Metabolism; Neuroscience; Signal Transduction; Autophagy

References	References for protein 1.Rouschop, K.M., et al. J. Clin. Invest. 120(1):127-141(2010) 2.Kirkin, V., et al. Mol. Cell 33(4):505-516(2009) 3.Othman, E.Q., et al. J. Clin. Lab. Anal. 23(4):249-258(2009) 4.Liu, Q., et al. Ai Zheng 27(1):25-29(2008) 5.Komatsu, M., et al. Cell 131(6):1149-1163(2007) References for U251 cell line: 1. Westermark B.; Pontén J.; Hugosson R. (1973)." Determinants for the establishment of permanent tissue culture lines from human gliomas". Acta Pathol Microbiol Scand A. 81:791-805. [PMID: 4359449]. 2. Pontén, J.,Westermark B. (1978)." Properties of Human Malignant Glioma Cells in Vitro". Medical Biology 56: 184-193.[PMID: 359950]. 3. Geng Y.;Kohli L.; Klocke B.J.; Roth K.A.(2010). "Chloroquine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent". Neuro Oncol. 12(5): 473-481.[PMID: 20406898].
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NCBI AND UNIPROT INFORMATION

NCBI GI #	12383056
NCBI GeneID	81631
NCBI Accession #	NP_073729.1
NCBI GenBank Nucleotide #	NM_022818.4
UniProt Accession #	Q9GZQ8; Q6NW02
NCBI Official Full Name	microtubule-associated proteins 1A/1B light chain 3B
NCBI Official Synonym Full Names	microtubule-associated protein 1 light chain 3 beta
NCBI Official Symbol	MAP1LC3B
NCBI Official Synonym Symbols	LC3B; ATG8F; MAP1LC3B-a; MAP1A/1BLC3
NCBI Protein Information	microtubule-associated proteins 1A/1B light chain 3B
UniProt Protein Name	Microtubule-associated proteins 1A/1B light chain 3B
UniProt Gene Name	MAP1LC3B
UniProt Synonym Gene Names	MAP1ALC3; MAP1A/MAP1B LC3 B
UniProt Entry Name	MLP3B_HUMAN

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