10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

APG8b (MAP1LC3B)-T93/Y99 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1802e

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9GZQ8
Other Accession	A6NCE7, NP_073729.1
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17597
Calculated MW	14688
Antigen Region	74-106

Additional Information

Gene ID	81631
Other Names	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
Target/Specificity	This APG8b (MAP1LC3B)-T93/Y99 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 74-106 amino acids from the Central region of human APG8b (MAP1LC3B)-T93/Y99.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
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.
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.
Precautions	APG8b (MAP1LC3B)-T93/Y99 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP1LC3B (HGNC:13352)

Synonyms	MAP1ALC3
Function	Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes) (PubMed:20418806, PubMed:23209295, PubMed:28017329). 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:23209295, PubMed:28017329). In response to cellular stress and upon mitochondria fission, binds C-18 ceramides and anchors autophagolysosomes to outer mitochondrial membranes to eliminate damaged mitochondria (PubMed:22922758). While LC3s are involved in elongation of the phagophore membrane, the GABARAP/GATE-16 subfamily is essential for a later stage in autophagosome maturation (PubMed:20418806, PubMed:23209295, PubMed:28017329). Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway (PubMed:24089205). 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:31006537, PubMed:31006538). Upon nutrient stress, directly recruits cofactor JMY to the phagophore membrane surfaces and promotes JMY's actin nucleation activity and autophagosome biogenesis during autophagy (PubMed:30420355).
Cellular Location	Cytoplasmic vesicle, autophagosome membrane; Lipid-anchor Endomembrane system; Lipid-anchor Mitochondrion membrane; Lipid-anchor. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q9CQV6}. Cytoplasmic vesicle. Note=LC3-II binds to the autophagic membranes. LC3-II localizes with the mitochondrial inner membrane during Parkin-mediated mitophagy (PubMed:28017329). Also localizes to discrete punctae along the ciliary axoneme
Tissue Location	Most abundant in heart, brain, skeletal muscle and testis. Little expression observed in liver

Background

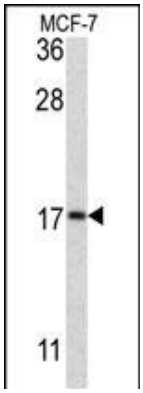
The product of this gene is a subunit of neuronal microtubule-associated MAP1A and MAP1B proteins, which are involved in microtubule assembly and important for neurogenesis. Studies on the rat homolog implicate a role for this gene in autophagy, a process that involves the bulk degradation of cytoplasmic component.

References

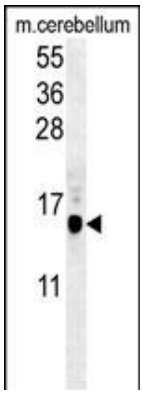
Rouschop, K.M., et al. J. Clin. Invest. 120(1):127-141(2010)
Othman, E.Q., et al. J. Clin. Lab. Anal. 23(4):249-258(2009)
Komatsu, M., et al. Cell 131(6):1149-1163(2007)
Stelzl, U., et al. Cell 122(6):957-968(2005)
Tanida, I., et al. J. Biol. Chem. 279(46):47704-47710(2004)
He, H., et al. J. Biol. Chem. 278(31):29278-29287(2003)
Tanida, I., et al. J. Biol. Chem. 277(16):13739-13744(2002)
Tanida, I., et al. Biochem. Biophys. Res. Commun. 292(1):256-262(2002)
Kabeya, Y., et al. EMBO J. 19(21):5720-5728(2000)
Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000)

Images

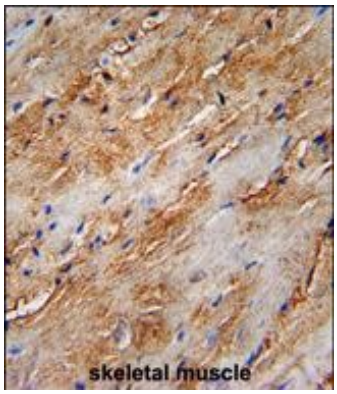
Western blot analysis of APG8b (MAP1LC3B) Antibody



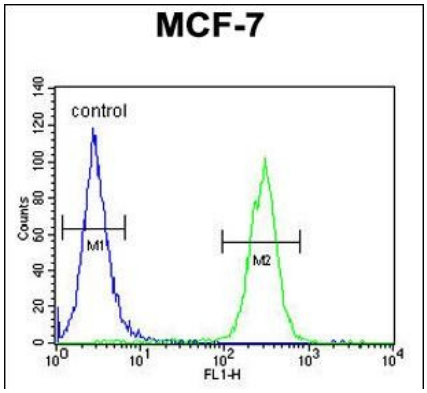
(T93/Y99) (Cat. #AP1802e) in MCF-7 cell line lysates (35ug/lane). MAP1LC3B (arrow) was detected using the purified Pab.



APG8b (MAP1LC3B)-T93/Y99 (Cat. #AP1802f) western blot analysis in mouse cerebellum tissue lysates (35ug/lane).This demonstrates the MAP1LC3B antibody detected MAP1LC3B protein (arrow).



APG8b (MAP1LC3B)-T93/Y99 Antibody (Center) (Cat. #AP1802e) 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 APG8b (MAP1LC3B)-T93/Y99 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



APG8b (MAP1LC3B)-T93/Y99 Antibody (Center) (Cat. #AP1802e) flow cytometric analysis of MCF-7 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Autophagy Mediates Cytotoxicity of Human Colorectal Cancer Cells Treated with Garcinielliptone FC.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.