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LC3B Rabbit pAb

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Catalog # AP94034

Product Information

Application	WB
Primary Accession	Q9CQV6
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	14617
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse LC3B
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic. Endomembrane system; Lipid-anchor. Cytoplasmic vesicle, autophagosome membrane; Lipid-anchor. Note: LC3B binds to the autophagic membranes.
SIMILARITY	Belongs to the MAP1 LC3 family.
SUBUNIT	3 different light chains, LC1, LC2 and LC3, can associate with MAP1A and MAP1B proteins. Interacts with SQSTM1. Interacts with TP53INP1 and TP53INP2.
Post-translational modifications	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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	A major contributor to cellular homeostasis is the ability of the cell to strike a balance between the formation and degradation/removal of its cellular components. This process of internal cellular turn-over is called autophagy (self-eating), and is facilitated by a pathway of around 16 interacting proteins in the human. LC3, a ubiquitin-like modifier protein, is the human homolog of yeast Apg8 and is involved in the formation of autophagosomal vacuoles, called autophagosomes. LC3 is expressed as 3 splice variants (LC3A, LC3B and LC3C), which exhibit different tissue distributions and are processed into cytosolic and autophagosomal membrane-bound forms, termed LC3-I and LC3-II, respectively. A disruption to the autophagic process is now associated with the progression of several cancers, neurodegenerative disorders and cardiac pathologies, where LC3 is widely employed as a marker for autophagy.

Additional Information

Gene ID	67443

Other Names	Microtubule-associated protein 1 light chain 3 beta, Autophagy-related protein LC3 B, Autophagy-related ubiquitin-like modifier LC3 B, MAP1 light chain 3-like protein 2, Microtubule-associated proteins 1A/1B light chain 3B, MAP1A/MAP1B LC3 B, MAP1A/MAP1B light chain 3 B, Map1lc3b {ECO:0000312|MGI:MGI:1914693}, Map1alc3, Map1lc3
Target/Specificity	Most abundant in heart, brain, liver, skeletal muscle and testis but absent in thymus and peripheral blood leukocytes.
Dilution	WB=1:200-1000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Map1lc3b {ECO:0000312|MGI:MGI:1914693}
Synonyms	Map1alc3, Map1lc3
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. In response to cellular stress and upon mitochondria fission, binds C-18 ceramides and anchors autophagolysosomes to outer mitochondrial membranes to eliminate damaged mitochondria. 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. Upon nutrient stress, directly recruits cofactor JMY to the phagophore membrane surfaces and promotes JMY's actin nucleation activity and autophagosome biogenesis during autophagy.
Cellular Location	Cytoplasmic vesicle, autophagosome membrane; Lipid- anchor {ECO:0000250|UniProtKB:Q9GZQ8}. Endomembrane system; Lipid-anchor {ECO:0000250|UniProtKB:Q9GZQ8}. Mitochondrion membrane {ECO:0000250|UniProtKB:Q9GZQ8}; Lipid-anchor {ECO:0000250|UniProtKB:Q9GZQ8}. Cytoplasm, cytoskeleton. Cytoplasmic vesicle {ECO:0000250|UniProtKB:Q9GZQ8}. Note=LC3-II binds to the autophagic membranes. LC3-II localizes with the mitochondrial inner membrane during Parkin-mediated mitophagy (By similarity). Also localizes to discrete punctae along the ciliary axoneme (By similarity) {ECO:0000250|UniProtKB:Q9GZQ8}

Background

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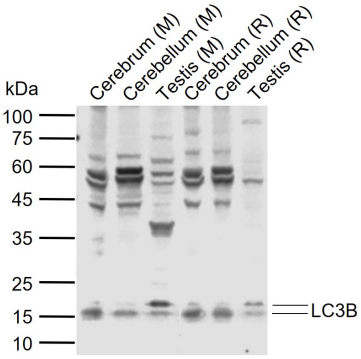
Images



Sample: Lane 1: Mouse Cerebrum tissue lysates Lane 2: Mouse Cerebellum tissue lysates Lane 3: Mouse Testis tissue lysates Lane 4: Rat Cerebrum tissue lysates Lane 5: Rat Cerebellum tissue lysates Lane 6: Rat Testis tissue lysates Primary: Anti-LC3B (AP94034) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 14 kDa Observed band size: 15,17 kDa