

Rabbit LC3B Polyclonal Antibody | anti-LC3B antibody

Phospho-LC3B (Thr29) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329426	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (92%), Bovine (100%), Sheep (100%), Dog (100%), Xenopus (100%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

LC3B; Polyclonal Antibody; Phospho-LC3B (Thr29) Antibody; ATG8F; Autophagy-related protein LC3 B; Autophagy-related ubiquitin-like modifier LC3 B; LC3II; MAP1 light chain 3 like protein 2; MAP1 light chain 3-like protein 2; MAP1A/1BLC3; MAP1A/MAP1B LC3 B; MAP1A/MAP1B light chain 3 B; MAP1ALC3; MAP1LC3B a; Map1lc3b; Microtubule associated protein 1 light chain 3 beta; Microtubule-associated protein 1 light chain 3 beta; Microtubule-associated proteins 1A/1B light chain 3B; MLP3B_HUMAN; anti-LC3B antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (92%), Bovine (100%), Sheep (100%), Dog (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-LC3B (Thr29) Antibody detects endogenous levels of LC3B only when phosphorylated at Thr29. Tissue Specificity: Most abundant in heart, brain, skeletal muscle and testis. Little expression observed in liver.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-LC3B antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human LC3B around the phosphorylation site of Thr29.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	The precursor molecule is cleaved by 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. The Legionella effector RavZ is a deconjugating enzyme that produces an ATG8 product that would be resistant to re-conjugation by the host machinery due to the cleavage of the reactive C-terminal glycine. Phosphorylation at Thr-12 by PKA inhibits conjugation to phosphatidylethanolamine (PE) (By similarity). Interaction with MAPK15 reduces the inhibitory phosphorylation and increases autophagy activity.
Subunit Structure	3 different light chains, LC1, LC2 and LC3, can associate with MAP1A and MAP1B proteins (By similarity). Interacts at microtubules with CABP1 (via EF-hands 1 and 2) but not with calmodulin. Interacts with FYCO1 (via C-terminus). Interacts with TP53INP1 and TP53INP2. Interacts with TBC1D25. Directly interacts with SQSTM1; this interaction leads to MAP1LC3B recruitment to inclusion bodies containing polyubiquitinated protein aggregates and to inclusion body degradation by autophagy. Interacts with ATG4B, MAPK15 and BNIP3. Interacts with MAPB1, KEAP1, PCM1, OFD1, CEP131, and TECPR2. Interacts with TBC1D5. Found in a complex with UBQLN1 and UBQLN2. Interacts with UBQLN4 (via STI1 1 and 2 domains). Interacts with UBQLN1 in the presence of UBQLN4. Interacts with ATG13. Interacts with RETREG2, RETREG1 and RETREG3. No interaction, or very weak, with WDFY3. Interacts with PLCL1; the interaction inhibits autophagosome formation (By similarity). Interacts with TRIM16. Interacts with CRY1 and PER2 (By similarity). Interacts with the reticulophagy receptor TEX264.

Similarity	Belongs to the ATG8 family.
Subcellular Location	Cytoplasm>Cytoskeleton. Endomembrane system>Lipid-anchor. Cytoplasmic vesicle>Autophagosome membrane>Lipid-anchor. Cytoplasmic vesicle>Autophagosome. Note: LC3-II binds to the autophagic membranes. Localizes also to discrete punctae along the ciliary axoneme (By similarity).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
At 1/100 staining Human prostate cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of Phospho-LC3B(Thr29) in lysates of hela overnight chloroquine (50 uM), using Phospho-LC3B(Thr29) Antibody(AF4350).



IHC (Immunohistochemisry)
At 1/100 staining Human pancreatic cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of extracts from Hela cells overnight chloroquine (50 uM), using Phospho-LC3B(Thr29) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-LC3B antibody	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. Whereas 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, paticipates in the remodeling of subdomains of the endoplasmic reticulum into autophagosomes upon nutrient stress, which then fuse with lysosomes for endoplasmic reticulum turnover.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	17433141
NCBI GeneID	81631
UniProt Accession #	Q9GZQ8; Q6NW02
Molecular Weight	125
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; MAP1A/MAP1B LC3 B; MAP1A/MAP1B light chain 3 B; MAP1 light chain 3-like protein 2; autophagy-related ubiquitin-like modifier LC3 B
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

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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