

LC3 Antibody (APG8a/b) Blocking Peptide
Synthetic peptide
Catalog # BP1803a**Specification**

LC3 Antibody (APG8a/b) Blocking Peptide - Product InformationPrimary Accession [O9GZQ8](#)**LC3 Antibody (APG8a/b) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP1803a](/product/products/AP1803a) was selected from homologous region of human LV3 isoforms a and b (APG8a/b). A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LC3 Antibody (APG8a/b) Blocking Peptide - Protein InformationName MAP1LC3B ([HGNC:13352](#))

Synonyms MAP1ALC3

Function

Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes) (PubMed: [20418806](http://www.uniprot.org/citations/20418806)), (PubMed: [23209295](http://www.uniprot.org/citations/23209295)), (PubMed: [28017329](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/23209295))

target="_blank">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). 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

LC3 Antibody (APG8a/b) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

LC3 Antibody (APG8a/b) Blocking Peptide - Images

LC3 Antibody (APG8a/b) Blocking Peptide - Background

Autophagy is a process of intracellular bulk degradation in which cytoplasmic components including organelles are sequestered within double-membrane vesicles that deliver the contents to the lysosome/vacuole for degradation. There are three primary forms of autophagy: chaperone-mediated autophagy, microautophagy and macroautophagy. During macroautophagy, the sequestering vesicles, termed autophagosomes, fuse with the lysosome or vacuole resulting in the delivery of an inner vesicle (autophagic body) into the lumen of the degradative compartment. There are 16 proteins participating in autophagy pathway in human (<http://ca.expasy.org/cgi-bin/get-entries? KW=Autophagy&view=tree>). Abgent's exclusive product line for autophagy research, 2-4 epitopes for each protein, provides antibodies against each protein in the pathway.

LC3 Antibody (APG8a/b) Blocking Peptide - References

Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005) Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005) Greenberg JT. Dev Cell. 8(6):799-801. (2005) Levine B. Cell. 120(2):159-62.

(2005) Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004) Tanida I., et al. Int. J. Biochem. Cell Biol. 36:2503-2518 (2004) He H., et al. J. Biol. Chem. 278:29278-29287 (2003) Tanida I., et al. J. Biol. Chem. 279:36268-36276 (2004)