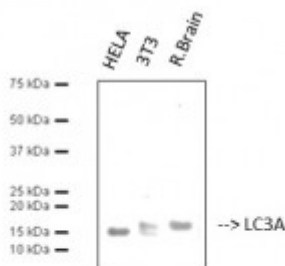


Anti-LC3A antibody



Western Blot (WB) analysis of 1. HELA 2. 3T3 3. Rat brain cells using LC3A Mouse Monoclonal Antibody(5G10). (STJ97755)



Description

LC3A is a protein encoded by the MAP1LC3A gene which is approximately 14,3 kD. LC3A is localised to the cytoplasm, cytoskeleton and autophagosome. It is involved in pathways such as the autophagy pathway, pink/parkin mediated mitophagy, ferroptosis, cellular senescence and pathways affecting insulin-like growth factor-Akt signalling. MAP1A and MAP1B fall under the LC3A protein. They are microtubule-associated proteins that mediate the physical interactions between microtubules and components of the cytoskeleton. LC3A is most abundant in heart, brain, liver, skeletal muscle and testis but absent in thymus and peripheral blood leukocytes. Mutations in the LC3A gene may result in Nasu-Hakola disease, lacrimal gland adenocarcinoma and leber congenital amaurosis. STJ97755 was developed from clone 5G10. It was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen. The antibody detects endogenous levels of LC3A.

Model	STJ97755
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IHC, WB
Immunogen	synthetic peptide derived from LC3A
Gene ID	84557
Gene Symbol	MAP1LC3A
Dilution range	WB 1:1000-2000IHC 1:100-200
Specificity	LC3A Mouse Monoclonal Antibody (5G10) detects endogenous levels of LC3A

Tissue Specificity	Most abundant in heart, brain, liver, skeletal muscle and testis but absent in thymus and peripheral blood leukocytes.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	5G10
Note	For Research Use Only (RUO).
Protein Name	Microtubule-associated proteins 1A/1B light chain 3A Autophagy-related protein LC3 A Autophagy-related ubiquitin-like modifier LC3 A MAP1 light chain 3-like protein 1 MAP1A/MAP1B light chain 3 A MAP1A/MAP1B LC3 A Microt
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6838OMIM:601242
Alternative Names	Microtubule-associated proteins 1A/1B light chain 3A Autophagy-related protein LC3 A Autophagy-related ubiquitin-like modifier LC3 A MAP1 light chain 3-like protein 1 MAP1A/MAP1B light chain 3 A MAP1A/MAP1B LC3 A Microt
Function	Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes) . Whereas LC3s are involved in elongation of the phagophore membrane, the GABARAP/GATE-16 subfamily is essential for a later stage in autophagosome maturation .
Cellular Localization	Cytoplasm, cytoskeleton. Endomembrane system. Lipid-anchor. Cytoplasmic vesicle, autophagosome membrane. Lipid-anchor. Cytoplasmic vesicle, autophagosome. LC3-II binds to the autophagic membranes.
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 Ser-12 by PKA inhibits conjugation to phosphatidylethanolamine (PE). Interaction with MAPK15 reduces the inhibitory phosphorylation and increases autophagy activity.