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LC3 Antibody (APG8C) (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1804a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9BXW4
Reactivity	Human, Mouse
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	16852
Antigen Region	1-30

Additional Information

Gene ID	440738
Other Names	Microtubule-associated proteins 1A/1B light chain 3C, Autophagy-related protein LC3 C, Autophagy-related ubiquitin-like modifier LC3 C, MAP1 light chain 3-like protein 3, MAP1A/MAP1B light chain 3 C, MAP1A/MAP1B LC3 C, Microtubule-associated protein 1 light chain 3 gamma, MAP1LC3C
Target/Specificity	This LC3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human LC3.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	LC3 Antibody (APG8C) (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP1LC3C
Function	Ubiquitin-like modifier that plays a crucial role in antibacterial autophagy (xenophagy) through the selective binding of CALCOCO2 (PubMed:23022382).

	Recruits all ATG8 family members to infecting bacteria such as S.typhimurium (PubMed:23022382). May also play a role in aggrephagy, the macroautophagic degradation of ubiquitinated and aggregated proteins (PubMed:28404643).
Cellular Location	Cytoplasmic vesicle, autophagosome membrane; Lipid-anchor. Endomembrane system; Lipid-anchor. Cytoplasm, cytoskeleton. Note=LC3-II binds to the autophagic membranes.
Tissue Location	Most abundant in placenta, lung and ovary.

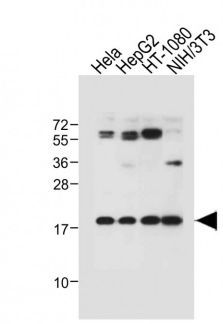
Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). MAP1A and MAP1B are microtubule-associated proteins which mediate the physical interactions between microtubules and components of the cytoskeleton. These proteins are involved in formation of autophagosomal vacuoles (autophagosomes). MAP1A and MAP1B each consist of a heavy chain subunit and multiple light chain subunits. MAP1LC3c is one of the light chain subunits and can associate with either MAP1A or MAP1B. 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.

References

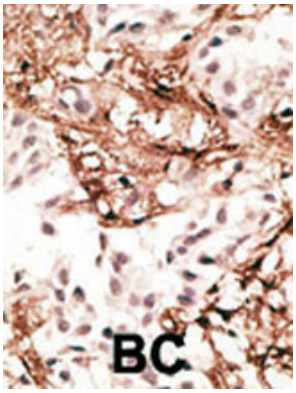
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Images



All lanes : Anti-APG8c (MAP1LC3C)-M1 at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: HT-1080 whole cell lysate Lane 4: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 17 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody,



followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Triterpenes from Ganoderma Lucidum induce autophagy in colon cancer through the inhibition of p38 mitogen-activated kinase (p38 MAPK).
- A novel mTOR activating protein protects dopamine neurons against oxidative stress by repressing autophagy related cell death.
- Allopregnanolone treatment delays cholesterol accumulation and reduces autophagic/lysosomal dysfunction and inflammation in Npc1-/- mouse brain.
- Down-regulation of autophagy-related protein 5 (ATG5) contributes to the pathogenesis of early-stage cutaneous melanoma.

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