

# LC3A-Specific Polyclonal antibody

Catalog Number: 18722-1-AP

11 Publications

## Basic Information

<b>Catalog Number:</b> 18722-1-AP	<b>GenBank Accession Number:</b> NM_032514	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 150ul , Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 84557	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:50-1:500 IF 1:10-1:100
<b>Source:</b> Rabbit	<b>Full Name:</b> microtubule-associated protein 1 light chain 3 alpha	
<b>Isotype:</b> IgG	<b>Calculated MW:</b> 14 kDa <b>Observed MW:</b> 15-18 kDa	

## Applications

<b>Tested Applications:</b> FC, IF, IHC, WB, ELISA	<b>Positive Controls:</b>
<b>Cited Applications:</b> IHC, WB	<b>WB :</b> mouse brain tissue, human brain tissue, rat brain tissue
<b>Species Specificity:</b> human, mouse, rat	<b>IHC :</b> human breast cancer tissue,
<b>Cited Species:</b> human, rat, mouse, zebrafish	<b>IF :</b> HepG2 cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

LC3A, also named as MAP1LC3A, LC3, MAP1ALC3 and MAP1BLC3, belongs to the MAP1 LC3 family. LC3A is one of the light chain subunits and can associate with either MAP1A or MAP1B which are microtubule-associated proteins that mediate the physical interactions between microtubules and components of the cytoskeleton. In cell biology, autophagy, or autophagocytosis, is a catabolic process involving the degradation of a cell's own components through the lysosomal machinery. It is a major mechanism by which a starving cell reallocates nutrients from unnecessary processes to more-essential processes. Two forms of LC3, called LC3-I (17-19kd) and -II (14-16kd), were produced post-translationally in various cells. LC3-I is cytosolic, whereas LC3-II is membrane bound. 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. The amount of LC3-II is correlated with the extent of autophagosome formation. LC3-II is the first mammalian protein identified that specifically associates with autophagosome membranes. (PMID:11060023) MAP1LC3 has 3 isoforms MAP1LC3A, MAP1LC3B and MAP1LC3C. MAP1LC3A and MAP1LC3C are produced by the proteolytic cleavage after the conserved C-terminal Gly residue, like their rat counterpart, MAP1LC3B does not undergo C-terminal cleavage and exists in a single modified form. (PMID:12740394) This antibody is specific to LC3A. It recognizes both LC3A-I and LC3A-II.

## Notable Publications

Author	Pubmed ID	Journal	Application
Lei Zhang	36116140	Phytother Res	WB
Yongmei Li	34545297	Oxid Med Cell Longev	WB
Xingli Zhu	25388970	J Cell Mol Med	WB

## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
**Aliquoting is unnecessary for -20°C storage**

\*\*\* 20ul sizes contain 0.1% BSA

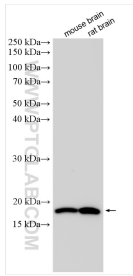
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

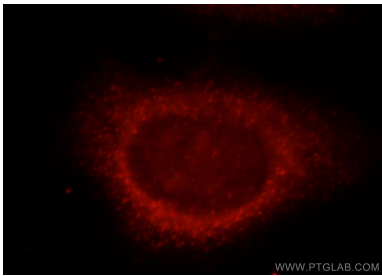
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 18722-1-AP (LC3A-Specific antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



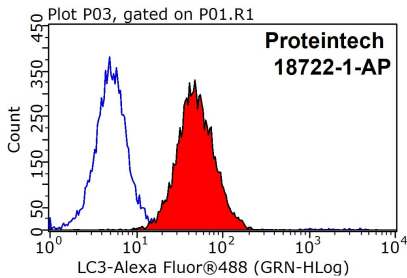
Immunofluorescent analysis of HepG2 cells, using MAP1LC3A antibody 18722-1-AP at 1:25 dilution and Rhodamine-labeled goat anti-rabbit IgG (red).



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 18722-1-AP (LC3A-Specific antibody) at dilution of 1:200 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 18722-1-AP (LC3A-Specific antibody) at dilution of 1:200 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



1X10<sup>6</sup> HeLa cells were stained with 0.2ug LC3A-Specific antibody (18722-1-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1000.