For Research Use Only

LC3B-Specific Polyclonal antibody

Catalog Number:18725-1-AP 336 Publications

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Basic Information

Catalog Number:
18725-1-AP

Size:
150ul , Concentration: 700 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

GenBank Accession Number:
NM_022818

GeneID (NCBI):
81631

ENSEMBL Gene ID:
ENSG00000140941

UNIPROT ID:
Q9GZQ8

Full Name:
microtubule-associated protein 1 light chain 3 beta

Calculated MW:
15 kDa

Observed MW:
15 kDa, 18 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:300-1:1000
IHC 1:50-1:500
IF/ICC 1:50-1:500

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), ELISA

Cited Applications:
WB, IHC, IF, IP

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat, pig, zebrafish, bovine

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

Positive Controls:

WB : human brain tissue, MCF-7 cells, TN treated Hela, A549 cells, UV treated HEK-293, mouse brain tissue, HepG2 cells

IHC : mouse brain tissue, rat brain tissue

IF/ICC : Chloroquine treated HeLa cells, Chloroquine treated HepG2 cells

Background Information

LC3B, also named as MAP1LC3B, MAP1A/1BLC3, belongs to the MAP1 LC3 family. It is a subunit of neuronal microtubule-associated MAP1A and MAP1B proteins, which are involved in microtubule assembly and important for neurogenesis. In cell biology, autophagy, or autophagocytosis, is a catabolic process involving the degradation of a cell's own components through the lysosomalmachinery. 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. 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. This antibody is specific to LC3B.

Notable Publications

Author	Pubmed ID	Journal	Application
Karuna Irungbam	31570772	Lab Invest	IHC,IF
Yushan Mao	36175702	Med Oncol	IF
Huandi Liu	36163615	J Med Virol	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
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:
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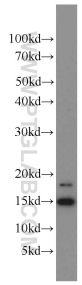
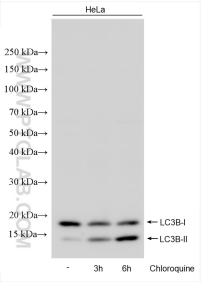
E: proteintech@ptglab.com
W: ptglab.com

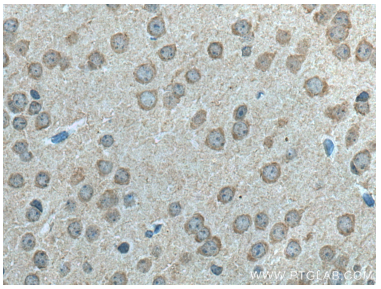
Selected Validation Data



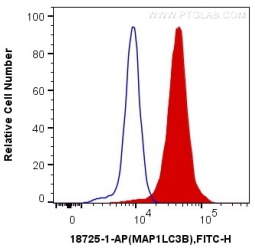
human brain tissue were subjected to SDS PAGE followed by western blot with 18725-1-AP (LC3B-Specific antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



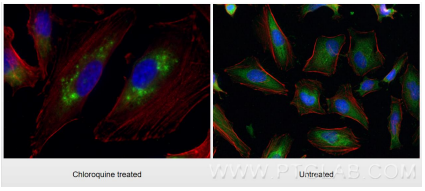
Non-treated and Chloroquine treated HeLa cells were subjected to SDS PAGE followed by western blot with 18725-1-AP (LC3B-Specific antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



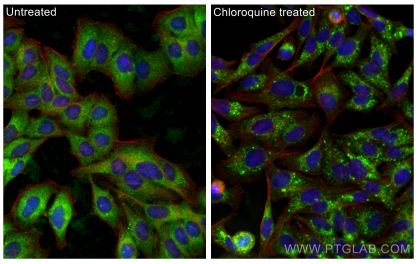
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 18725-1-AP (LC3B-Specific antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



1X10^6 HeLa cells were intracellularly stained with 0.4 ug Anti-Human LC3B-Specific (18725-1-AP) and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



Immunofluorescent analysis of (-20°C Ethanol) fixed Chloroquine treated HeLa cells using LC3B-Specific antibody (18725-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).



Immunofluorescent analysis of (-20°C Ethanol) fixed Chloroquine treated HepG2 cells using LC3B-Specific antibody (18725-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-phalloidin (red).