

For Research Use Only

LC3B-Specific Polyclonal antibody

Catalog Number: 18725-1-AP **279 Publications**



Basic Information

| | | |
|--|---|---|
| Catalog Number: 18725-1-AP | GenBank Accession Number: NM_022818 | Purification Method: Antigen affinity purification |
| Size: 150ul, Concentration: 500 µg/ml by Nanodrop; | GeneID (NCBI): 81631 | Recommended Dilutions: WB 1:300-1:1000 IHC 1:50-1:500 IF 1:50-1:500 |
| Source: Rabbit | ENSEMBL Gene ID: ENSG00000140941 | |
| Isotype: IgG | UNIPROT ID: Q9GZQ8 | |
| | Full Name: microtubule-associated protein 1 light chain 3 beta | |
| | Calculated MW: 15 kDa | |
| | Observed MW: 15 kDa, 18 kDa | |

Applications

| | |
|---|---|
| Tested Applications: WB, IF, FC, IHC, ELISA | 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 : Chloroquine treated HeLa cells, Chloroquine treated HepG2 cells |
| Cited Applications: WB, IP, IF, IHC | |
| Species Specificity: human, mouse, rat | |
| Cited Species: human, rat, mouse, pig, bovine | |

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

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 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. 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

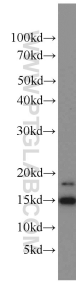
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

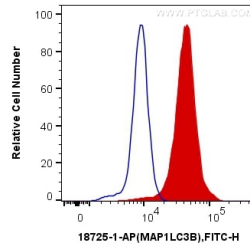
For technical support and original validation data for this product please contact:
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E: proteintech@ptglab.com
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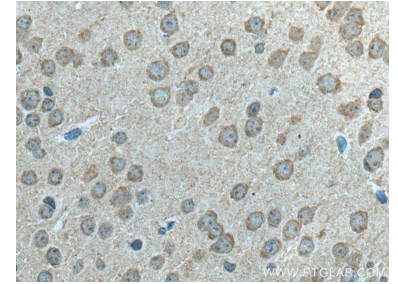
Selected Validation Data



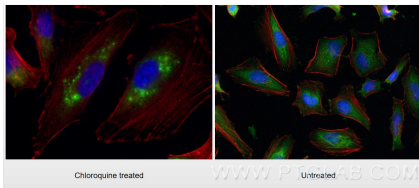
human brain tissue were subjected to SDS PAGE followed by western blot with 18725-1-AP (LC3B-Specific antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



1×10^6 HeLa cells were intracellularly stained with 0.4 ug Anti-Human LC3B-Specific (18725-1-AP) and CoraLite®488-Conjugated AffiniPure 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).



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).



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 AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).