



## MONOCLONAL ANTIBODY

*For research use only. Not for clinical diagnosis.*

**Catalog No. CTB-LC3-2-IC**

# Anti LC3 (Clone: LC3·1703)

## BACKGROUND

LC3B is one of the mammalian Atg8 homologs and widely used as an autophagosome marker. Immediately after synthesis, LC3 is processed by Atg4 and becomes LC3-I. Upon induction of autophagy, the C-terminal glycine of LC3-I is conjugated to phosphatidylethanolamine, resulting in formation of membrane-bound LC3-II. Most LC3-II is thought to be present on autophagosome membrane. The autophagosome subsequently fuses with a lysosome, where inside materials, including LC3-II, are degraded. The expression level of LC3-II generally correlates with the number of autophagosome.

<b>Product type</b>	Primary antibodies
<b>Host</b>	Mouse
<b>Source</b>	
<b>Form</b>	Liquid Protein G purified PBS (pH7.4) with 1% BSA and less than 0.1% NaN <sub>3</sub> as a preservative.
<b>Volume</b>	500 μl
<b>Concentration</b>	0.1mg/ml
<b>Specificity</b>	LC3
<b>Antigen</b>	Human Recombinant LC3
<b>Clone</b>	LC3·1703
<b>Isotype</b>	IgG1

**Application notes** ICC, Immuno EM  
**Recommended use**

### Recommended dilutions

ICC: 1/100

Immuno EM : 1/10

Optimal dilutions/concentrations should be determined by the end user.

### Staining Pattern

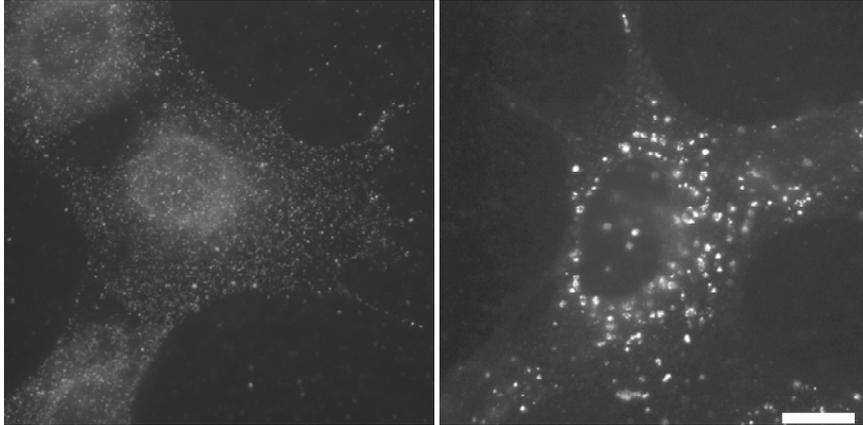
**Cross reactivity** Human

**Storage** Store below -20°C (below -70°C for prolonged storage).

Aliquot to avoid cycles of freeze/thaw.

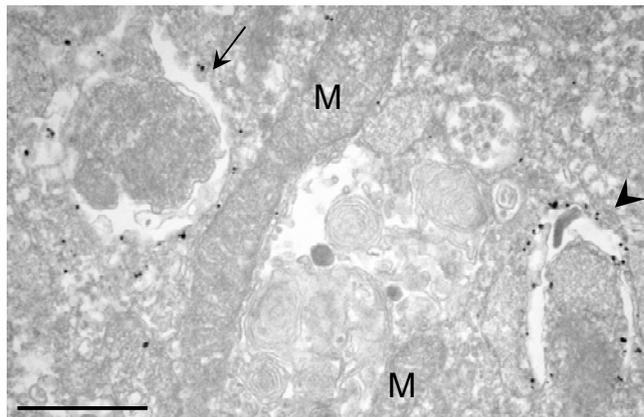
### References

- 1) Kabeya, Y., Mizushima, N., Ueno, T., Yamamoto, A., Kirisako, T., Noda, T., Kominami, E., Ohsumi, Y. and Yoshimori, T. LC3, a mammalian homologue of yeast Apg8p, is localized in autophagosome membranes after processing EMBO J. 19, 5720-5728. (2000)
- 2) Mizushima, N., Yoshimori, T. How to interpret LC3 immunoblotting Autophagy 3:542-545 (2007)
- 3) Mizushima, N., Yoshimori, T. and Levine, B. Methods in mammalian autophagy research. Cell 140; 313-326 (2010)



**(Fig 1) Immunofluorescence microscopy analysis of mouse embryonic fibroblasts (MEFs).**

MEFs were cultured in regular DMEM supplemented with 10% FBS (left) or DMEM without amino acids (right) for 1 hr. After fixation with 4% paraformaldehyde for 10 min at room temperature, they were permeabilized with 50 $\mu$ g/ml digitonin for 5 min. Cells were then subjected to immunofluorescence microscopy using #1703 anti-LC3 antibody at 1:100 dilution. Scale bar, 20 $\mu$ m.



**(Fig 2) Immuno-electron microscopy analysis of mouse embryonic fibroblasts (MEFs).**

MEFs were cultured in DMEM without amino acids for 2 hr. After fixation with 4% paraformaldehyde for 2 hr at room temperature, they were permeabilized with liquid nitrogen. Immuno-electron microscopy analysis (pre-embedding method) of endogenous LC3 was performed using #1703 anti-LC3 antibody at 1:10 dilution. The gold labeling was intensified by using a silver enhancement kit (HQ silver enhancement kit, Nanoprobes, NY). Scale bar, 500 nm.

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