



PRODUCT DATA SHEET

LC3B monoclonal antibody (2G6)

ALX-803-081

Product Number/Sizes

ALX-803-081-C100 100 µg

Product Specifications

| | |
|-----------------------------------|---|
| ALTERNATIVE NAME: | Microtubule-associated protein 1 light chain 3B, MAP1LC3B |
| CLONE: | 2G6 |
| HOST: | Mouse |
| ISOTYPE: | IgG1 |
| IMMUNOGEN: | Synthetic peptide corresponding to the N-terminus of LC3B conjugated to hemocyanin. |
| UNIPROT ID: | Q9GZQ8 |
| SPECIES REACTIVITY: | Human, Mouse, Rat Hamster, Monkey |
| SPECIFICITY: | Recognizes both forms of endogenous LC3B. |
| APPLICATIONS: | ICC, WB |
| RECOMMENDED DILUTIONS/CONDITIONS: | Immunocytochemistry (paraformaldehyde/methanol fixed cells; 1-10 µg/ml) Western Blot (0.5µg/ml for HRPO/ECL detection; recommended blocking buffer CPPT: 10mM TRIS-HCl, pH 7.4, 0.5% (w/v) casein, 1% (w/v) PEG 4000, 1% (w/v) polyvinylpyrrolidone, 0.1% (v/v) Tween 20, 150mM sodium chloride) We strongly recommend to use PVDF membranes for immunoblot analysis. Suggested dilutions/conditions may not be available for all applications. Optimal conditions must be determined individually for each application. |
| APPLICATION NOTES: | Detects a band of ~18kDa (LC3B-I; cytoplasmic form) and a band of ~16kDa (LC3B-II; lipidated form) by Western blot. |
| POSITIVE CONTROL: | Included. (Prod. No. ALX-840-038) |
| PURITY DETAIL: | Thiophilic adsorption and size exclusion chromatography purified. |
| FORMULATION: | Liquid. In PBS containing 50% glycerol, 0.09% sodium azide, PEG and sucrose. |
| USE/STABILITY: | Stable at -20°C up to 1 year. |
| HANDLING: | Avoid freeze/thaw cycles. |
| SHIPPING: | Shipped on Blue Ice |
| LONG TERM STORAGE: | -20°C |
| SCIENTIFIC BACKGROUND: | Autophagy is an alternative process of proteasomal degradation for some long-lived proteins or organelles. Alterations in the autophagic-lysosomal compartment have been linked to neuronal death in many neurodegenerative disorders as well as in transmissible neuronal pathologies (prion diseases). Genetic studies in yeast have shown that Autophagy-defective Gene-8 (Atg-8) represents a specific marker for autophagy. Among the four families of mammalian Atg8-related proteins only LC3 (Microtubule-associated Protein1 Light Chain 3) is expressed at sufficient high levels and efficiently recruited to autophagic vesicles in cells and tissues. During autophagy the cytoplasmic form, LC3-I is processed and recruited to autophagosomes, where LC3-II is generated by site specific proteolysis near to the C-terminus. Autophagic vacuoles have been also reported frequently in cardiomyopathies or muscle cells exposed to different experimental settings. |
| REGULATORY STATUS: | RUO - Research Use Only |

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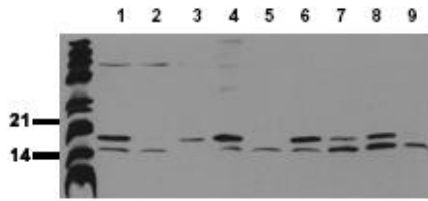


Figure: Western blot analysis of endogenous LC3 using MAb to LC3B (Prod. No. ALX-803-081). **Method:** Whole cell lysates of untreated tumor cells were applied to SDS-PAGE and transferred to a PVDF membrane. The immunoblot was probed with Monoclonal Antibody to LC3 (2G6) (Prod. No. ALX-803-081) (0.5 µg/ml) for 1h at RT and developed by ECL (exposure time: 30 sec).

Lane 1: HeLa Lane 2: HepG2 Lane 3: HEK 293 Lane 4: SH-SY5Y Lane 5: MDCK Lane 6: PC12 Lane 7: CMT Lane 8: Neuro2A Lane 9: NIH - 3T

Product Literature References

Oxidation of SQSTM1/p62 mediates the link between redox state and protein homeostasis B. Carroll, et al. *Nat. Commun.* **9** 256 (2018)

Autophagy controls the pathogenicity of OPA1 mutations in dominant optic atrophy M.S. Kane, et al. *J. Cell. Mol. Med.* **21** 2284 (2017)

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