

PRODUCT INFORMATION

MAP1LC3B/LC3B (human recombinant)

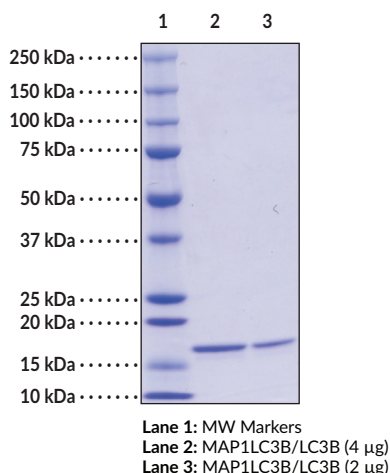
Item No. 25829

Overview and Properties

Synonyms:	Autophagy-related Protein LC3B, Autophagy-related Ubiquitin-like Modifier LC3B, MAP1 Light Chain 3-like Protein 2, Microtubule-associated Protein 1 Light Chain 3 β
Source:	Recombinant N-terminal histidine-tagged MAP1LC3B/LC3B purified from <i>E. coli</i>
Amino Acids:	2-120
Uniprot No.:	Q9GZQ8
Molecular Weight:	16.22 kDa
Storage:	-80°C (as supplied)
Stability:	≥ 1 year
Purity:	batch specific ($\geq 95\%$ estimated by SDS-PAGE)
Supplied in:	50 mM HEPES, pH 8.0, with 150 mM sodium chloride, and 10% glycerol
Protein Concentration:	batch specific mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Representative gel image shown; actual purity may vary between each batch.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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Description

Microtubule-associated protein 1 light chain 3 β (MAP1LC3B), also known as LC3B, is an ortholog of yeast Atg8 that is essential to autophagosome biogenesis.¹ LC3B is irreversibly cleaved by the cysteine protease ATG4B (Item No. 25380) to its active form LC3B-I, which contains an exposed C-terminal glycine residue needed for autophagosome formation.^{2,3} LC3B-I is then conjugated to phosphatidylethanolamine in canonical autophagy by the ATG12-ATG5-ATG16 complex to form LC3B-II, which localizes to the autophagosomal membrane.^{1,4-6} Knockdown of LC3B increases the number of ATG5- and ATG16-positive puncta in HeLa cells, indicating a defect in the maturation of autophagosomes.¹ LC3B expression is upregulated in various cancers and has disease-specific implications on progression and prognosis.^{7,8} In metastatic and castration-resistant human prostate cancer tumor samples, LC3B expression is upregulated and is positively correlated with reduced disease-specific mortality.⁷ Expression of LC3B is also increased in oral squamous cell carcinomas and is associated with aggressive pathological features and poor prognosis.⁸

References

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