Data Sheet (Cat.No.TMPY-03340)

TargetMol

MAP1LC3A Protein, Human, Recombinant (His)

General Information

Synonyms:	LC3;ATG8E;microtubule-associated protein 1 light chain 3 alpha;MAP1BLC3;MAP1ALC3;LC3A; microtubule-associated protein 1 light chain 3 α
Protein Construction:	A DNA sequence encoding the mature form of human MAP1LC3A (Q9H492-1) (Met1-Phe121) was expressed with a polyhistide tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q9H492-1
Molecular Weight:	15.1 kDa (predicted); 17 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 10% glycerol, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 2.5 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

LC3A, also known as MAP1LC3A, is one of the light chain subunits that function together with both MAP1A and/or MAP1B. MAP1A and MAP1B are microtubule-associated proteins that mediate the physical interactions between microtubules and components of the cytoskeleton. MAP1A and MAP1B each consist of a heavy chain subunit and multiple light chain subunits. As a light chain subunit, MAP1LC3A has an important part in neuronal development and in maintaining the balance between neuronal plasticity and rigidity. MAP1LC3A is expressed as two

alternatively spliced isoforms that are expressed in testis, brain, heart, liver, and skeletal muscle but are absent in thymus and peripheral blood leukocytes.

Reference

He H., et al.,(2003), Post-translational modifications of three members of the human MAP1LC3 family and detection of a novel type of modification for MAP1LC3B. J. Biol. Chem. 278:29278-29287.

Deloukas P., et al., (2001), The DNA sequence and comparative analysis of human chromosome 20.Nature 414: 865-871.

Bechtel S., et al.,(2007), The full-ORF clone resource of the German cDNA consortium.BMC Genomics 8:399-399.

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