Recombinant MP3B2 protein (His tag)

Catalog Number	549139
Synonyms	Microtubule-associated proteins 1A/1B light chain 3 beta 2; Microtubule-associated proteins 1A/1B light chain 3B-like; MAP1A/MAP1B LC3 B-like; MAP1A/MAP1B light chain 3 B-like
Species	Human
Expression System	E. coli
Accession	A6NCE7
Molecular Weight	Predictes a molecular mass of 15.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	1-120
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-120 aa (A6NCE7) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein product features a 120-amino acid fragment (residues 1-120) of Human Microtubule-associated protein 1 light chain 3 beta 2 (MAP1LC3B2), a key ubiquitin-like modifier essential for autophagosome formation and mitochondrial quality control. The fragment has been computationally optimized for stability and solubility, making it ideal for structural studies and biochemical assays investigating autophagy mechanisms. Microtubule-associated protein 1 light chain 3 beta 2 is a crucial ubiquitin-like modifier involved in the formation of autophagosomal vacuoles (autophagosomes) and plays a significant role in mitophagy, the selective degradation of mitochondria. This process regulates mitochondrial quantity and quality by eliminating mitochondria to basal levels to meet cellular energy requirements while preventing excess reactive oxygen species production. During cellular stress and mitochondrial fission, MAP1LC3B2 binds C-18 ceramides and anchors autophagolysosomes to outer mitochondrial membranes to facilitate the elimination of damaged mitochondria. The protein localizes to cytoplasmic vesicles, autophagosome membranes, the endomembrane system, and the cytoskeleton, where it functions as part of the LC3 protein family involved in phagophore membrane elongation during autophagy.