

MATERIAL DATA SHEET**His₆-Apg8p3 (MAP-LC3a), human recombinant**
Cat. # UL-430

There are at least three groups of mammalian Apg8 proteins which are homologs of the yeast Atg8 protein, including MAP-LC3a (**M**icrotubule-**a**ssociated **P**rotein **L**ight **C**hain-3) which is part of the LC3 subfamily. The mammalian Apg8 proteins are ubiquitin-like modifiers that have divergent functions in human, and are essential in autophagic conjugation systems. This modifier protein has a conserved C-terminal glycine residue that becomes covalently attached to phosphatidylethanolamine (PE) after it is activated by the Apg7p (E1) and Apg3p (E2) enzymes. MAP-LC3 is the most abundant Apg8 homolog in autophagosomal membranes, and is thought to play a major role in mammalian autophagy. Accession # NP_115903.

Product Information

Quantity:	500 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 8.0, 100 mM NaCl, 10% glycerol, 1 mM DTT. Actual concentration varies with lot number.
MW:	16.3 kDa
Purity:	> 95% by SDS-PAGE

Use & Storage

Use:	Typical concentration to support conjugation <i>in vitro</i> is 10-50 µM depending on conditions.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Hammerback J.A., <i>et al.</i> (1991) <u>Neuron</u> 7 : 521-524 He H., <i>et al.</i> (2003) <u>J.Biol.Chem.</u> 278 : 29278-29287 Langkopf A., <i>et al.</i> (1992) <u>J.Biol.Chem.</u> 267 : 16561-16566 Kabeya Y., <i>et al.</i> (2000) <u>EMBO J.</u> 19 : 5720-5728 Kabeya Y., <i>et al.</i> (2004) <u>J. Cell. Sci.</u> 117 : 2805-2812 Mann S.S., <i>et al.</i> (1996) <u>J. Neurosci.</u> 43 : 535-544 Mann S.S. and Hammerback J.A.. (1994) <u>J. Biol. Chem.</u> 269 : 11492-11497 Sugawara K., <i>et al.</i> (2004) <u>Genes. Cells.</u> 9 : 611-618
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