

## MATERIAL DATA SHEET

### Recombinant Human LC3A

#### Cat. # UL-455

Microtubule-associated proteins 1A/1B light chain 3A (also known as MAP1LC3A) is an Ubiquitin-like modifier of the ATG8 family and is involved in the formation of the autophagosomes. This protein interacts directly with Sequestosome-1 and is recruited to inclusion bodies containing polyubiquitinated protein aggregates where it plays a role in inclusion body degradation by autophagy. MAP1LC3A-Rhodamine110 (Rh110) is a fluorogenic substrate for the autophagy hydrolase ATG4B. This substrate is useful for studying ATG4B when detection sensitivity or continuous monitoring of activity is essential.

#### Product Information

<b>Quantity:</b>	50 µg
<b>MW:</b>	14 kDa
<b>Source:</b>	<i>E. coli</i> -derived Accession # Q9H492
<b>Stock:</b>	0.62 mg/ml (44 µM) in 50 mM MES, pH 6.0, 100 mM NaCl, 20% glycerol
<b>Purity:</b>	>90%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

#### Use & Storage

<b>Use:</b>	Recombinant Human MAP1LC3A Rhodamine is ideal for use in assays requiring fluorescent detection. Optimal fluorescence at pH 8.0 is monitored with an excitation wavelength of 485 nm and an emission wavelength of 535 nm. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human MAP1LC3A Rhodamine concentration of 0.1-1 µM.
<b>Storage:</b>	<b>Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 12 months from date of receipt, -70 °C as supplied.</li><li>• 3 months, -70 °C under sterile conditions after opening.</li></ul>

## Literature

### References:

1. Borodovsky A., et al. (2002) Chem. Biol. **9**:1149-1159
2. Hemelaar J., et al. (2003) J Biol. Chem. **278**:51841-51850
3. Kessler B.M. (2006) Exp. Rev. Proteomics. **3**:213-221
4. Kumanomidou T., et al. (2006) J. Mol. Biol. **355**:612-618
5. Love K.R, et al. (2007) Nat. Chem. Biol. **3**:697-705
6. Wilkinson K.D. et al. (2005) Meth. Enz. **399**:37-51

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