

Lot # XXXXX

BostonBiochem

MATERIAL DATA SHEET

His₆-ATG3, human recombinant

Cat. # E2-670

Autophagy-related 3 (ATG3), also known as Apg3L and Apg3p, functions as a regulatory component of autophagosome biogenesis necessary for autophagy. It is a 314 amino acid (aa) protein with a predicted molecular weight of 36 kDa. ATG3 exhibits 98% aa sequence identity with both its mouse and rat orthologs. It is a Ubiquitin-conjugating (E2)-like enzyme that works in concert with Atg12-Atg5, a Ubiquitin Ligase (E3)-like enzyme conjugate, to catalyze the transfer of Atg8 (LC3, GATE-16, and GABARAP in mammals) to phosphatidylethanolamine (PE) in the developing autophagosome membrane. This lipidation of Atg8 proteins is necessary for autophagosome maturation.

Product Information

Quantity:	100 µg
Stock:	0.92 mg/ml (25 µM) in 50 mM HEPES pH 7.5, 100 mM NaCl, 10% (v/v) Glycerol, 1 mM DTT
MW:	37 kDa
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue

Use & Storage

Use:	Typical enzyme concentration to support conjugation <i>in vitro</i> is 100 nM-1 µM depending on conditions.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Ichimura, Y. <i>et al.</i> (2000) <i>Nature</i> 408 : 488 Ichimura, T. <i>et al.</i> (2004) <i>J. Biol. Chem.</i> 279 : 40584 Yamaguchi, M. <i>et al.</i> (2010) <i>J. Biol. Chem.</i> 285 : 29599 Otomo, C. <i>et al.</i> (2013) <i>Nat. Struct. Mol. Biol.</i> 20 : 59 Shpilka, T. <i>et al.</i> (2012) <i>Genome Biol.</i> 12 : 226
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Rev: 05/19/2017

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