

**Autophagy Vesicle Elongation (Atg12 Conjugation) Antibody Sampler Kit****Orders:** 877-616-CELL (2355)  
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1 Kit (4 x 20 microliters)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Atg5 (D5F5U) Rabbit mAb	12994	20 µl	55 kDa	Rabbit IgG
Atg12 (D88H11) Rabbit mAb	4180	20 µl	16, 55 kDa	Rabbit IgG
Atg16L1 (D6D5) Rabbit mAb	8089	20 µl	66, 68 kDa	Rabbit IgG
Atg7 (D12B11) Rabbit mAb	8558	20 µl	78 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.**Description**

The Autophagy Vesicle Elongation (Atg12 Conjugation) Antibody Sampler Kit provides an economical means of detecting proteins related to autophagy vesicle elongation pathway. The kit contains enough antibody to perform two western blot experiments per primary antibody.

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibodies.

**Background**

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation but has also been associated with a number of physiological processes including development, differentiation, neurodegeneration, infection, and cancer (3). The molecular machinery of autophagy was largely discovered in yeast and referred to as autophagy-related (Atg) genes. Formation of the autophagosome involves a ubiquitin-like conjugation system in which Atg12 is covalently bound to Atg5 and targeted to autophagosome vesicles (4-6). This conjugation reaction is mediated by the ubiquitin E1-like enzyme Atg7 and the E2-like enzyme Atg10 (7,8). Atg16L1 binds Atg5 of the Atg12-Atg5 conjugate forming an 800 kDa multimeric complex (9). The Atg12-Atg5-Atg16L1 complex localizes to pre-autophagosomal membranes where it determines the site of LC3 lipidation and catalyzes the reaction required for the formation of mature autophagosomes (9,10).

**Background References**

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