

Autophagy Vesicle Elongation (LC3 Conjugation) Antibody Sampler Kit

Cat# AK0127

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents. Autophagy is generally activated by conditions of nutrient deprivation, but it has also been associated with a number of physiological processes including development, differentiation, neurodegenerative diseases, infection, and cancer. Autophagy marker Light Chain 3 (LC3) was originally identified as a subunit of microtubule-associated proteins 1A and 1B (termed MAP1LC3) and subsequently found to contain similarity to the yeast protein Apg8/Aut7/Cvt5 critical for autophagy. Three human LC3 isoforms (LC3A, LC3B, and LC3C) undergo post-translational modifications during autophagy. Cleavage of LC3 at the carboxy terminus immediately following synthesis yields the cytosolic LC3-I form. During autophagy, LC3-I is converted to LC3-II through lipidation by a ubiquitin-like system involving Atg7 and Atg3 that allows for LC3 to become associated with autophagic vesicles. The presence of LC3 in autophagosomes and the conversion of LC3 to the lower migrating form, LC3-II, have been used as indicators of autophagy. Numerous mammalian counterparts to yeast Atg proteins have been described, including three Atg8 proteins (GATE-16, GABARAP, and LC3) and four Atg4 homologs (Atg4A/autophagin-2, Atg4B/autophagin-1, Atg4C/autophagin-3, and Atg4D/autophagin-4). The cysteine protease Atg4 is pivotal to autophagosome membrane generation and regulation. GABAA receptor associated protein (GABARAP) is an Atg8 family protein with a key role in autophagy, which was originally discovered as a protein associated with the GABAA receptor regulating receptor trafficking to the plasma membrane. Processing of GABARAP involves cleavage by Atg4 family members followed by conjugation by the E1 and E2 like enzymes Atg7 and Atg3.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340438	ATG4B Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse	Rabbit
A340728	ATG4A Polyclonal Antibody	20µL	WB, IHC-p, IF, ELISA	Human, Mouse	Rabbit
A340140	ATG3 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.