

Autophagosome Marker Antibody Sampler Kit

Cat# AK0123

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 has also been associated with a number of physiological processes including development, differentiation, neurodegeneration, infection, and cancer. 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. This conjugation reaction is mediated by the ubiquitin E1-like enzyme Atg7 and the E2-like enzyme Atg10. 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 that is 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.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A330127	MAP1LC3A Monoclonal Antibody	20µL	WB,IHC-p,IF	Human,Mouse,Rat	Mouse
A340725	MAP1LC3B Polyclonal Antibody	20µL	WB,IHC-p,IF	Human,Mouse,Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat
A1012s	Goat Anti-Mouse IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Mouse	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.