

Autophagy Assay Kit

Autophagy Assay Kit, Red

CATALOG #
AAA52738

PRODUCT SYNONYMS

Autophagy; Autophagy Assay Kit; Red; Autophagy assay kit

PRODUCT SPECIFICATIONS

Samples	Cell culture
Excitation/Emission	590 nm / 620 nm
Reagent	Autophagy probe
Preparation and Storage	Store at <= -20 degree C for Nigericin component, 2-8 degree C for remaining kit components.

ADDITIONAL INFORMATION

Related Product Information for Autophagy assay kit	Background: Autophagy is a conserved lysosomal recycling process by which cells break down their own components such as proteins, lipids, and carbohydrates. Autophagy plays a critical role in maintaining homeostasis by preventing the accumulation of damaged organelles by disassembling unnecessary or dysfunctional cells and cellular components¹. Autophagy occurs at low levels in the cell under normal conditions and can be rapidly upregulated during times of starvation or stress. Such degradation activities serve to provide nutrients (amino acids, nucleotides, fatty acids, etc.) and energy during periods of elevated bioenergetic demands^{1,2}. Another function of autophagy is to assist with the detection and destruction of intracellular pathogens (viruses, bacteria, and parasites)³. Dysregulation of autophagy has been associated with many disease states including cancer, infection, and degenerative diseases². Autophagy is a dynamic process typically divided into three stages (Figure 1)¹. During stage one, cytoplasmic components targeted for degradation are sequestered within a double-membrane phagophore (also called the isolation membrane). This results in the formation of double-membrane vesicle called the autophagosome. During stage two, the autophagosome fuses with the lysosome to form the autophagolysosome or autolysosome. Degradation of the autophagosomal contents occurs during stage three^{1,4}. The Autophagy Assay, Red enables researchers to detect and monitor the in vitro development of autophagy in living cells. Autophagy Probe, Red is a cell-permeant aliphatic molecule that fluoresces brightly when inserted in the lipid membranes of autophagosomes and autolysosomes. Autophagy Probe, Red can be readily detected by flow cytometry (Figure 2) with optimal excitation at 590 nm and peak emission at 620 nm. Autophagy Probe, Red is for research use only. Not for use in test procedures.
Product Categories/Family for Autophagy assay kit	Autophagy

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/autophagy/52738>