

Product datasheet

Lysosomal Intracellular Activity Assay Kit ab234622

3 Images

Overview

Product name	Lysosomal Intracellular Activity Assay Kit
Detection method	Fluorescent
Sample type	Adherent cells, Suspension cells
Assay type	Cell-based
Species reactivity	Reacts with: Other species, Mammals
Product overview	Lysosomal Intracellular Activity Assay Kit (ab234622) provides a proprietary Lysosome-Specific Self-Quenched Substrate which has low background fluorescence, high signal to background ratio and is pH insensitive. The substrate, acting as endocytic cargo, can be taken up by cells and degraded within an endo-lysosomal vesicle. The fluorescent signal is recovered from the Self-Quenched Substrate. The fluorescence signal, generated by degradation, is proportional to the intracellular lysosomal activity and can be measured using a fluorescence microscopy and/or flow cytometry. The kit includes Cytochalasin D, a cell-permeable inhibitor of endocytosis that serves as an experimental control. This easy-to-use, non-radioactive kit allows imaging and accurate measurement of de-queching substrate in cultured cells.

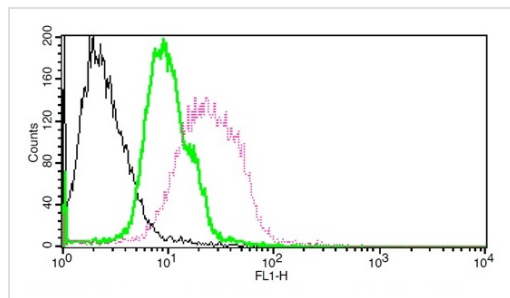
Notes Lysosomes are membrane-bound organelles important for various cellular processes. They contain hydrolytic enzymes that are utilized in the metabolism of some biomolecules. The extracellular cargo (e.g. nutrients toxins) binds to the cell membrane and is subsequently transported into membrane-bound endosomes for further degradation by lysosomes while intracellular components are transported to lysosomes through autophagy. Lysosomal dysfunction is associated with many human conditions such as aging and neurodegenerative disease.

Platform Flow cytometer, Fluorescence microscope

Properties

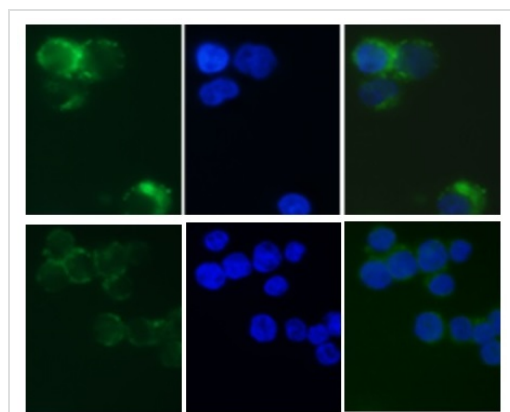
Storage instructions Store at -20°C. Please refer to protocols.

Components	50 tests
Assay Buffer (50X)	1 x 1.8ml
Self-Quenched Substrate	1 vial
Cytochalasin D (100X)	1 x 50µl



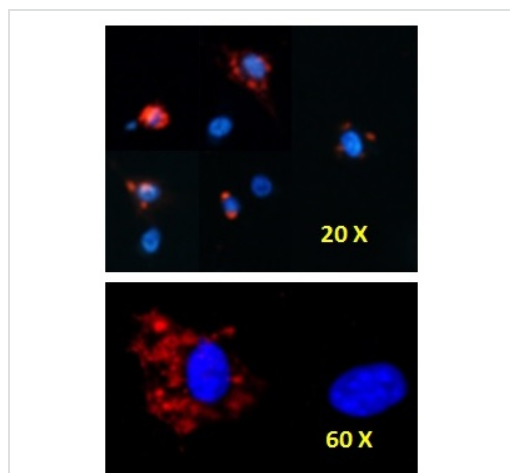
Release of self-Quenched Substrate in U937 cells.

1x10⁶ U937 cells were pretreated with vehicle or 1X Cytochalasin D for 1 hour. After pre-treatment, cells were incubated with Self-Quenched Substrate and the same concentration of Cytochalasin D for additional hour in medium supplemented with 0.5% FBS according to kit's protocol. Comparison of histograms from flow analysis showing the inhibition of De-Quenching of Substrate by Cytochalasin D. Unstained cells (black); experimental control (green) in the presence of 1X Cytochalasin D; Positive control (pink) without 1X Cytochalasin D.



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