

Cathepsin B Assay Kit ab270787

Overview

Product name Cathepsin B Assay Kit

Product overview The Cathepsin B Assay Kit (ab270787) enables researchers to quantitate and monitor intracellular cathepsin activity over time in vitro. The Rhodamine 110 Cathepsin B substrate reagent is a non-cytotoxic and membrane permeant substrate that fluoresces green upon cleavage by active cathepsin enzymes.

To use this kit, add the Rhodamine substrate directly to the cell culture media, incubate, and analyze. Because it is a cell permeant, it easily penetrates the cell membrane and the membranes of the internal cellular organelles – no lysis or permeabilization steps are required. If cathepsin enzymes are active, they will cleave off the two arginine-arginine cathepsin B targeting sequences and allow the rhodamine 110 fluorophore to become fluorescent upon excitation.

By varying the duration and concentration of exposure to the Rhodamine substrate, a picture can be obtained of the relative abundance and intracellular location of cathepsin enzymatic activity. Positive cells will fluoresce green, while negative cells will exhibit very low levels of background green fluorescence. There is no interference from pro-cathepsins forms of the enzymes. If the treatment or experimental condition stimulates cathepsin activity, cells containing elevated levels of cathepsin activity will appear brighter green than cells with lower levels of cathepsin activity.

The Rhodamine substrate has an optimal excitation of 500 nm and emission of 525 nm. Hoechst 33342 is included with the kit to concurrently label nuclei after labeling with the Rhodamine substrate. Hoechst 33342 is revealed under a microscope using a UV-filter with excitation at 365 nm and emission at 480 nm. Cells can be easily analyzed by flow cytometry or fluorescence microscopy.

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	25 tests	100 tests
10X Cellular Assay Buffer	1 x 15ml	1 x 60ml
Hoechst 33342, 200 µg/mL	1 vial	1 vial

Components	25 tests	100 tests
Rhodamine 110-(RR)2 substrate, 25 tests	1 vial	4 vials

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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