CREATIVE BIOMART®
Assay Kit

Calpain Activity Assay Kit

Product Information

Cat.No. Kit-0145

Product Overview

Calpain Activity Assay Kit is use for measuring calpain activity.

Description

Activation of calpain is involved in many forms of physiological and pathological processes (e.g., apoptosis). Calpain activation requires cell membrane and Ca2+, and activated calpain is released into cytosol. The Calpain Activity Assay Kit provides optimized buffers and reagents for a convenient measurement of calpain activity. The Extraction Buffer provided with the kit specifically extracts cytosolic proteins without contaminations of cell membrane and lysosome proteases. The Extraction Buffer also prevents auto-activation of calpain during the extraction procedure. Thus, the kit detects only activated calpain in cytosol upon treatment of cells with inducers (e.g., chemicals or drugs). The fluorometric assay is based on the detection of cleavage of calpain substrate Ac-LLY-AFC. Ac-LLY-AFC emits blue light (λmax = 400 nm); upon cleavage of the substrate by calpain, free AFC emits a yellow-green fluorescence (λmax = 505 nm), which can be quantified using a fluorometer or a fluorecence plate reader. Comparison of the fluorescence intensity from a treated sample with a normal control allows determination of the changes in calpain activity.

Target Species

Mammals

Usage

For research use only (RUO)

Storage

Store kit at –70°C (Store Extraction Buffer and 10X Reaction Buffer at 4°C after opening). All reagents are stable for 6 months under proper storage conditions.

Kit Components

Extraction Buffer 25 ml10X Reaction Buffer 1.5 mlCalpain Substrate Ac-LLY-AFC 0.5 mlActive Calpain

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I (Positive Control) 10 μlCalpain Inhibitor Z-LLY-FMK 10 μl

Detection method Fluorometric

Compatible Sample Types

Cell Lysate, Tissue Lysate

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