abcam

Product datasheet

Generic Caspase Activity Assay Kit (Fluorometric - Red) ab112131

1 Image

Overview

Product name	Generic Caspase Activity Assay Kit (Fluorometric - Red)
Detection method	Fluorescent
Sample type	Adherent cells, Suspension cells
Assay type	Enzyme activity (quantitative)
Species reactivity	**Reacts with:** Mammals, Other species
Product overview	Abcam Activity Assay kits are a set of tools for monitoring cellular functions. The activation of caspase is widely accepted as a reliable indicator for cell apoptosis. Most caspases have substrate selectivity for the peptide sequence Val-Ala-Asp (VAD). ab112131 is designed to monitor cell apoptosis through measuring generic caspases (caspase-1, -3, -4, -5, -6, -7, -8 and -9) activation in live cells with our red fluorescent TF5-VAD-FMK probe. Most caspases have substrate selectivity for the peptide sequence Val-Ala-Asp (VAD). The cell permeable and nontoxic TF5-VAD-FMK irreversibly binds to activated casepase-1, -3, -4, -5, -6, -7, -8 and -9 in apoptotic cells. Once bound to caspases, the fluorescent reagent is retained inside the cell. The binding event prevents the caspases from further activation but will not stop apoptosis from proceeding. ab112131 can be conveniently used with the common fluorescence instruments equipped with the light sources and filters Ex/Em = ~647/660 nm. The red label allows for direct detection of activated caspases in apoptotic cells by a flow cytometer. It can be used for the quantification of most activated caspases activities in apoptotic cells, or for the screening of caspases inhibitors. The kit provides all the essential components. Visit our **FAQs page** for tips and troubleshooting.
Platform	Flow cytometer

Properties

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

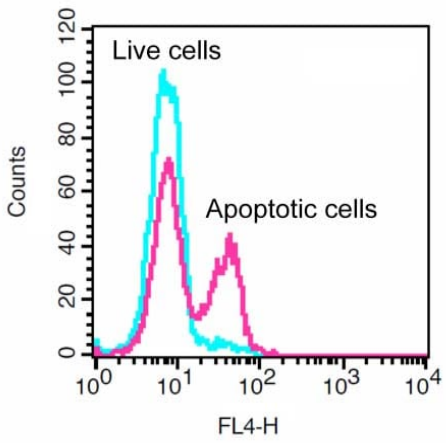
Components	100 tests
500 X Green-DCS1	1 x 100µl

Components	100 tests
500 X TF5-VAD-FMK	1 x 100µl
Assay Buffer	1 x 50ml

Relevance Caspases are members of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce 2 subunits, large and small, that dimerize to form the active enzyme.

Cellular localization Cytoplasmic

Images



Flow Cytometry - Generic Caspase Activity Assay Kit (Fluorometric - Red) (ab112131)

Jurkat cells were untreated (Blue) or with 20 µM camptothecin (Pink) in a 37^{o}C, 5% CO_2 incubator for 4-5 hours, and then dye loaded with TF5-VAD-FMK for 1 hour.

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