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Caspase-3 DEVD-R110 Fluorometric HTS Assay Kit



A fluorometric endpoint assay kit for detection of caspase-3 activity in cells by high throughput screening (HTS).

Product attributes

Apoptosis/viability marker	Caspase
For live or fixed cells	Cell lysis required
Detection method/readout	Microplate reader (fluorescence)
Assay type/options	Endpoint assay, High-throughput assay, Homogeneous assay
Substrate specificity	Caspases
Colors	Green
Excitation/Emission	496/520 nm (end product)
Storage Conditions	Store at -10 to -35 °C

Product Description

Caspase-3 DEVD-R110 Fluorometric HTS Assay Kit is a homogenous assay system for fast and highly sensitive detection of caspase-3 activity in mammalian cells. The kit is specifically designed for high throughput screening (HTS)-based assays. For real-time detection of caspase-3 activity in intact cells, learn about our novel NucView® Caspase-3 Substrates.

About this kit

Caspase-3 is an active cell-death protease involved in the execution phase of apoptosis. The fluorogenic and chromogenic substrate (Ac-DEVD)2-R110 contains two DEVD tetrapeptides and is completely hydrolyzed by the caspase-3 in two successive steps. Cleavage of the first DEVD peptide results in the monopeptide Ac-DEVD-R110 intermediate, which has absorption and emission wavelengths similar to those of R110 (rhodamine 110) (Ex/Em= 496/520 nm) but has only about 10% of the fluorescence of the latter. Hydrolysis of the second DEVD peptide releases the dye R110, leading to a substantial fluorescence increase.

The assay kit includes Ac-DEVD-CHO, which is a caspase-3 inhibitor and can be used as a negative control. Also, R110 is provided in the kit for generating a standard curve, which can be used for quantifying caspase-3 activity.

Note: While caspase-3 preferentially cleaves the consensus sequence DEVD compared to other substrate sequences, other caspases can also cleave DEVD efficiently. Overlapping caspase substrate recognition limits the usefulness of caspase substrate peptides for distinguishing between different caspase activities in cell lysates.

NucView® enzyme substrate technology is covered by U.S. patents.

References

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