

Caspase-3 Fluorometric Substrate, DEVD-AFC

CATALOG NO: 1007-200 200 assays (1 x 1 ml vials)
1007-1000 1000 assays (5 x 1 ml vials)

STORAGE CONDITION: Store at -20° C, protected from light.

SHELF LIFE: 6 months under proper storage conditions

MOLECULAR WEIGHT: 729.0

SEQUENCE: Ac-Asp-Glu-Val-Asp-AFC
(AFC, 7-amino-4-trifluoromethyl coumarin)

PURITY: >98% by HPLC analysis.

DESCRIPTION:

Ready-to-use fluorometric substrate for caspase-3/CPP32 ($K_m = 9.7 \mu\text{M}$) and related caspases that recognize the amino acid sequence DEVD. The sequence DEVD is based on caspase-3 cleavage site in poly (ADP-ribose) polymerase (PARP). CPP32 and related caspase activity can be quantified by fluorescent detection of free AFC after cleaved from the peptide substrate DEVD-AFC at $\text{Ex.} = 400 \text{ nm}$ and $\text{Em.} = 505 \text{ nm}$, using a fluorometer or a multi-well fluorescence plate reader. Alternatively, a shift in fluorescence from blue to green upon cleavage can be visualized using a hand-held long-UV lamp.

ASSAY PROTOCOL:

1. Induce apoptosis in cells by desired method. Concurrently incubate a control culture *without* induction.
2. Count cells and pellet $1-5 \times 10^6$ cells or use 50-200 μg cell lysates if protein concentration has been measured.
3. Resuspend cells in 50 μl of chilled Cell Lysis Buffer (Cat.# 1067-100).
4. Incubate cells on ice for 10 minutes.
5. Add 50 μl of 2X Reaction Buffer (Cat.# 1068-20, -80) containing 10 mM DTT (Cat.# 1201-1) to each sample.
6. Add 5 μl of the 1 mM DEVD-AFC (50 μM final conc.) into each tube individually and incubate at 37° C for 1-2 hour.
7. Read samples in a fluorometer equipped with a 400-nm excitation filter and 505-nm emission filter. For a plate-reading set-up, transfer the samples to a 96-well plate. You may perform the entire assay directly in a 96-well plate.
8. Fold-increase in caspase-3 activity can be determined by comparing these results with the level of the uninduced control.

RELATED PRODUCTS:

Apoptosis Detection Kits & Reagents

- Annexin V Kits & Bulk Reagents
- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers and Set
- Apoptosis siRNA Vectors

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

Cell Proliferation & Senescence

- Quick Cell Proliferation Assay Kit
- Senescence Detection Kit
- High Throughput Apoptosis/Cell Viability Assay Kits
- LDH-Cytotoxicity Assay Kit
- Bioluminescence Cytotoxicity Assay Kit
- Live/Dead Cell Staining Kit

Cell Damage & Repair

- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents
- DNA Damage Quantification Kit
- Glutathione & Nitric Oxide Fluorometric & Colorimetric Assay Kits

Signal Transduction

- cAMP & cGMP Assay Kits
- Akt & JNK Activity Assay Kits
- Beta-Secretase Activity Assay Kit

Adipocyte & Lipid Transfer

- Recombinant Adiponectin, Survivin, & Leptin
- CETP Activity Assay & Drug Discovery Kits
- PLTP Activity Assay & Drug Discovery Kits
- Total Cholesterol Quantification Kit

Molecular Biology & Reporter Assays

- siRNA Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit
- β -Galactosidase Staining Kit & Luciferase Reporter Assay Kit

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