FITC-C6-DEVD-FMK

Ordering Information:	*Storage Conditions:*
Product Number: #13406 (1 mg)	Keep at -20°C and desiccated. Expiration date is 12 months from the date of receipt.

Chemical and Physical Properties

Peptide Sequence: FITC-Asp-Glu-Val-Asp-FMK
Molecular Weight: 994.99
Solvent: dimethylsulfoxide (DMSO)
Spectral Properties: Ex/Em = 492/514 nm

Biological Applications:

Caspases play important roles in apoptosis and cell signaling. The activation of caspase 3 (CPP32/apopain) is important for the initiation of apoptosis. Caspase 3 is also identified as a drug-screening target. It has been proven that caspase 3 has substrate selectivity for the peptide sequence Asp-Glu-Val-Asp (DEVD).

FITC-C6-DEVD-FMK provides a convenient method for detecting activated caspase-3 in living cells. FITC-DEVD-FMK is cell permeable, nontoxic, and irreversibly binds to activated caspase-3 in apoptotic cells. The FITC label allows for direct detection of activated caspases in apoptotic cells by fluorescence microscopy, flow cytometry or fluorescence plate reader.

Storage Conditions:

Store at -20 °C.

Sample Protocol for Staining Cells:

The following recommend procedure can be adapted for most cell types. You must determine optimum conditions experimentally for each test.

1. Culture your cells, and induce apoptosis following your protocol, and create positive and negative controls.
2. Make 5 to 10 mM DMSO stock solution. The stock solution should be used promptly, and any remaining solution need be aliquoted and refrozen at -20°C. (*Note: Avoid repeated freeze-thaw cycles and protect from it light).*
3. Take one vial out, and make 10 to 50 µM assay solution by diluting the DMSO stock solution with an assay buffer of your choice (we recommend use Hank's and 20 mM Hepes buffer).
4. Add equal volume of the assay solution (from Step 3) to the cell wells (or tubes), and incubate the cells at 37°C for 1-2 hours.
5. Wash and spin the cells twice.
6. If desired, label the cells with a DNA stain (such as Hoechst dyes and DAPI for live cells, and Propidium Iodide or 7AAD for dead cells).
7. If desired, fix cells.
8. Analyze data using a fluorescence microscope, plate reader, or flow cytometer.

References:

1. Li JN, Song DQ, Jiang JD. (2004) [Antitumor mechanism of 3-bromopropionylamino benzoylurea on leukemia and lymphoma]. Yao Xue Xue Bao, 39, 491.
2. Thrane C, Kaufmann U, Stummann BM, Olsson S. (2004) Activation of caspase-like activity and poly (ADP-ribose) polymerase degradation during sporulation in Aspergillus nidulans. Fungal Genet Biol, 41, 361.
3. Pandey S, Smith B, Walker PR, Sikorska M. (2000) Caspase-dependent and independent cell death in rat hepatoma 5123tc cells. Apoptosis, 5, 265.

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