

Z-Asp(OMe)-Glu(OMe)-Val-Asp(OMe)-FMK Inhibitor

Catalog No.: NBP2-29396; 1 mg

NBP2-29396; 5 mg

Sequence: Z-Asp(OMe)-Glu(OMe)-Val-Asp(OMe)-FMK
Z-D(OMe)E(OMe)VD(OMe)-FMK**Formula:** C₃₀H₄₁O₁₂N₄F**Molecular Weight:** 668**Storage:** The solid product is stable in the dessicator at room temperature for 1 year. However, we recommend storing dessicated at -20°C.**Form:** White Solid**Analytical Data:****Mass Spec:** M+1=669.3.**Chromatography:** EtOAc:9, Hex: 1, Single Spot, Rf:0.5

SOLUBILITY: Make a stock solution of 20 mM in high purity DMSO (>99.9%). The stock solution is stable at -20°C for 6-8 months. Avoid repeated freeze/thaw cycles of the stock solution. For multiple uses, we suggest aliquoting the stock solution prior to freezing. Bring the solution to room temperature before opening the vial cap.

Background

Members of the caspase family play key roles in apoptosis and inflammation. Z-D(OMe)E(OMe)VD(OMe)-FMK (Z-DEVD-FMK) is a cell-permeable caspase peptide inhibitor that irreversibly binds to the catalytic site of caspases proteases, and inhibits caspase-mediated apoptosis by preventing caspase activity (reviewed in 1-3). Caspase inhibitors, like Z-DEVD-FMK, with the peptide recognition sequence DEVD are potent inhibitors of caspase-3 and were first described as caspase-3 inhibitors. It is now known that caspase inhibitors with the peptide recognition sequence DEVD also inhibit other caspases, albeit at higher concentrations. However, Z-DEVD-FMK and other inhibitors with the DEVD peptide recognition sequence continue to be denoted as caspase-3 specific inhibitors by a number of sources.

The Z-D(OMe)E(OMe)VD(OMe)-FMK (Z-DEVD-FMK) peptide is O-methylated in the P4, P3 and P1 positions providing enhanced stability and increased cell permeability. Z-DEVD-FMK is typically used in assays to inhibit apoptosis. Z-DEVD-FMK has been used in many different types of apoptosis assays and published extensively; for example, a PubMed search reveals over 300 references citing Z-DEVD-FMK between 1999 and 2003. Users may want to consult the literature for additional information regarding applications for Z-DEVD-FMK.

Thornberry, N.A., and Lazebnik, Y. 1998. *Science* 281:1312-1316

Gregoli, P.A., and M.C. Bondurant. 1999. *J. Cell Physiol.* 178:133-143.

Schrantz, N., D.A. Blanchard, M.T. Auffredou, S. Sharma, G. Leca, and A. Vazquez. 1999. *Oncogene* 18:3511-3519.