Background: The synthetic peptide Z-VAD(OMe)-FMK is a cell permeable, irreversible pan-caspase inhibitor that displays non-cytotoxic effects (1-4). Z-VAD(OMe)-FMK prevents caspase-3 from adopting its active form and thereby blocks apoptosis (5). Research studies show that Z-VAD(OMe)-FMK also inhibits other enzymes, including cathepsin B, PNGase, and picornaviral 2A proteinases (6-8). Additional studies demonstrate that Z-VAD(OMe)-FMK can inhibit mitogen-induced T cell proliferation (2,9,10).

Background References:

Molecular Formula: C_{22}H_{30}FN_{3}O_{7}

Molecular Weight: 467.5 g/mol

Solubility: Soluble in DMSO at 5 mg/ml. Poorly soluble in water.

Purity: >95%

**Z-VAD(OMe)-FMK**

Store at -20°C

1 mg

#60332

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Storage: Store lyophilized or in solution at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use: Z-VAD(OMe)-FMK is supplied as a lyophilized powder. For a 10 mM stock, reconstitute the 1 mg of powder in 213.9 μl of DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used as a pre-treatment at 5-100 μM for 1 hr.

**Western blot analysis of extracts from Jurkat cells, untreated (-) or treated with Etoposide #2200 (25 μM, 5 hr; +), either with or without Z-VAD(OMe)-FMK pretreatment (1 hr) at the indicated concentrations, using Cleaved Caspase-8 (Asp391) (18C8) Rabbit mAb #9496, Caspase-8 (1C12) Mouse mAb #9746, Cleaved PARP (D64E10) XP® Rabbit mAb #5625, and PARP (46D11) Rabbit mAb #9532.**