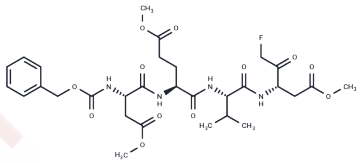
Data Sheet (Cat.No.T6005)

TargetMol

Z-DEVD-FMK

Chemical Properties



CAS No. : 210344-95-9

Formula: C30H41FN4O12

Molecular Weight: 668.66

Appearance: no data available

Storage: store under nitrogen,store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Z-DEVD-FMK (Caspase-3 Inhibitor) is a selective, irreversible Caspase-3 inhibitor, and also exhibits effective inhibition activity on caspase-6, caspase-7, caspase-8, and caspase-10.
Targets(IC50)	Caspase
In vitro	**METHODS**: v-K-ras transformed normal rat kidney cells KNRK were treated with SCH56582 (20 μM) and Z-DEVD-FMK (20-50 μM) for 24 h. Cell death was detected using trypan blue. **RESULTS**: Addition of 50 μM Z-DEVD-fmk resulted in >70% inhibition of apoptosis. [1] **METHODS**: Human multiple myeloma cells KM3 were treated with betulinic acid (15 μg/mL) and Z-DEVD-FMK (50 mol/L) for 24 h, and the expression level of target proteins was detected using Western Blot. **RESULTS**: Z-DEVD-FMK attenuated the betulinic acid-induced activation of caspase 3. Z-DEVD-FMK significantly blocked the cleavage of PARP. Z-DEVD-FMK significantly blocked PARP cleavage. [2]
In vivo	**METHODS**: To test the in vivo activity, Z-DEVD-FMK (1.8 mg/kg in ethanol and freshly diluted in PBS containing 2% Tween-80) was injected intraperitoneally into C57BL/6 mice, followed by CPT-11 (350 mg/kg) 30 min later. Z-DEVD-FMK was continued to be administered once daily for three days. **RESULTS**: Caspase-3 inhibitor Z-DEVD-FMK attenuated PT-11-induced GATA6-deficient mouse peritoneal macrophages. [3]
Kinase Assay	Caspase activity assay : Caspase-3 and caspase-9 activities are measured using fluorescent-based substrate. After treatment, the cells are resuspended in lysis buffer (50 mM Tris HCl, 1 mM EDTA, and 10 mM EGTA) containing 10 mM digitonin for 20 min at 37°C. Supernatants are treated with either of the fluorogenic substrates Ac-DEVD-AFC for caspase-3 or Ac-LEHD-AFC for caspase-9 for 1 h at 37°C and fluorescence is measured at excitation at 400 nm and emission at 505 nm using a Gemini XS fluorescence plate reade
Cell Research	N27 cells are incubated with 100 μM 6-OHDA for 24 h or 300 μM MPP+ for 36 h in the presence or absence of 50 μM Z-DEVD-FMK and cell death is determined by MTT (3-(4,5-dimethylthiazol-3-yl)-2,5-diphenyl tetrazolium bromide) assay, which is widely used to assess cell viability. After treatment, the cells are incubated in serum-free medium containing 0.25 mg/ml MTT for 3 h at 37°C. Formation of formazan from tetrazolium is measured at 570 nm with a reference wavelength at 630 nm using a SpectraMax

	microplate reader.(Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 50 mg/mL (74.78 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4955 mL	7.4776 mL	14.9553 mL
5 mM	0.2991 mL	1.4955 mL	2.9911 mL
10 mM	0.1496 mL	0.7478 mL	1.4955 mL
50 mM	0.0299 mL	0.1496 mL	0.2991 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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