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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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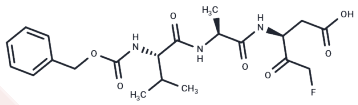
Data Sheet (Cat.No.T7020)

TargetMol

Z-VAD-FMK

Chemical Properties



CAS No. : 161401-82-7

Formula: C21H28FN3O7

Molecular Weight: 453.46

Appearance: no data available

Storage: store at low temperature,keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Z-VAD-FMK (Caspase Inhibitor VI) is a broad-spectrum inhibitor of caspases.Z-VAD-FMK binds to activated caspases and inhibits apoptosis.Z-VAD-FMK does not inhibit UCHL1 activity, even at concentrations up to 440 μM.
Targets(IC50)	Caspase
In vitro	**METHODS**: Neutrophils were treated with Z-VAD-FMK (0.03-300 μM) for 30 min, then incubated with 200 U/mL TNFα for 6 h. Apoptosis was detected by Flow Cytometry. **RESULTS**: Z-VAD-FMK had a biphasic effect on TNFα-stimulated neutrophil apoptosis. 100 μM or more of Z-VAD-FMK enhanced TNFα-induced apoptosis, whereas 30 μM or less inhibited apoptosis. [1] **METHODS**: Human colorectal cancer cells HCT116 and SW480 were pretreated with Z-VAD-FMK (20 μM) for 1 h, then incubated with CPT (10-1000 ng/mL) and 5-FU (5-12.5 μg/mL) for 48 h to induce apoptosis, and then the expression levels of target proteins were detected by Western Blot. **RESULTS**: CPT and 5-FU induced significant up-regulation of cleaved caspase-3, caspase-8 and PARP, and Z-VAD-FMK pretreatment eliminated the activation of apoptosis-related proteins. [2] **METHODS**: Human T-lymphoblastic leukemia cells Jurkat were treated with Z-VAD-FMK (10-200 μM) for 24 h after pulsing, and cell viability was measured using propidium iodide. **RESULTS**: The optimal concentration of Z-VAD-FMK was 50 μM, which increased cell viability from 35% to 74% compared to untreated control. [3]
In vivo	**METHODS**: To detect anti-tumor activity in vivo, C57/BL6 mice bearing mouse melanoma tumor B16 were treated with RT (2 Gy local irradiation of the tumor on day 8/9/10), DTIC (2 mg/pc intraperitoneal injection on day 8/10), and a combination of Z-VAD-FMK (2 mg/kg intraperitoneal injection on day 8/9/10) and HT (4 h post-irradiation on day 8/10). **RESULTS**: Multimodal tumor therapy with RT, DTIC, and HT in combination with Z-VAD-FMK retarded tumor growth in a T-cell-dependent manner. [4] **METHODS**: To investigate the role of Z-VAD-FMK in endotoxin shock, Z-VAD-FMK (5-20 μg/g) was administered as a single intraperitoneal injection to LPS-induced endotoxin shock in C57BL/6 mice. **RESULTS**: Z-VAD-FMK treatment significantly prolonged the survival time of mice for

	several hours and increased the survival rate. Z-VAD-FMK treatment significantly reduced the mortality rate of mice treated with different doses of LPS. [5]

Solubility Information

Solubility	5% DMSO+95% Saline: 4.15 mg/mL (9.15 mM) H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 83 mg/mL (183 mM), DMSO: 55 mg/mL (121.29 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2053 mL	11.0263 mL	22.0527 mL
5 mM	0.4411 mL	2.2053 mL	4.4105 mL
10 mM	0.2205 mL	1.1026 mL	2.2053 mL
50 mM	0.0441 mL	0.2205 mL	0.4411 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

Cowburn AS, et al. z-VAD-fmk augmentation of TNF alpha-stimulated neutrophil apoptosis is compound specific and does not involve the generation of reactive oxygen species. Blood. 2005 Apr 1;105(7):2970-2.
Yan C,