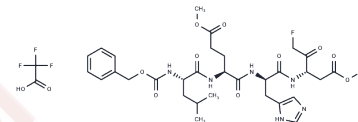


Z-LEHD-FMK TFA

Chemical Properties

CAS No. :	524746-03-0
Formula:	C34H44F4N6O12
Molecular Weight:	804.75
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Z-LEHD-FMK TFA is a specific and irreversible inhibitor of caspase-9, providing protection against detrimental reperfusion injury and moderating apoptosis, with demonstrated neuroprotective potential in a rat model of spinal cord trauma.
Targets(IC50)	Apoptosis,Caspase
In vitro	Z-LEHD-FMK at a concentration of 20 μ M, when pretreated for 30 minutes, effectively shields HCT116 and 293 cells from TRAIL-induced toxicity and apoptosis [1]. Furthermore, this compound, when applied for 6 hours, safeguards normal human hepatocytes against TRAIL-induced apoptosis [1]. Apoptosis analysis indicates that a 20 μ M concentration of Z-LEHD-FMK, following a 30-minute pretreatment, results in protection against TRAIL-induced apoptosis specifically in HCT116 and 293 cells [1]. Western blot analysis reveals that, at the same concentration and with a 2-hour incubation, Z-LEHD-FMK prevents the cleavage of procaspase 3 in HCT116 cells, showcasing its protective effect against apoptosis. However, this protective effect is not observed in SW480 cells, particularly notable at the 16-hour time point [1].
In vivo	Z-LEHD-FMK (0.8 μ mol/kg; i.v. for 7 d) demonstrates neuroprotective effects in spinal cord injury (SCI) male Wistar albino rats (250-350 g), protecting neurons, glia, myelin, axons, and intracellular organelles[2]. Intravenously administered at 0.8 μ mol/kg for 1 or 7 days, it significantly reduces apoptotic cell count at 24 hours and 7 days post-injury [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2426 mL	6.2131 mL	12.4262 mL
5 mM	0.2485 mL	1.2426 mL	2.4852 mL
10 mM	0.1243 mL	0.6213 mL	1.2426 mL
50 mM	0.0249 mL	0.1243 mL	0.2485 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ozoren N, et, al. The caspase 9 inhibitor Z-LEHD-FMK protects human liver cells while permitting death of cancer cells exposed to tumor necrosis factor-related apoptosis-inducing ligand. *Cancer Res.* 2000 Nov 15; 60(22): 6259-65.

Colak A, et, al. Neuroprotection and functional recovery after application of the caspase-9 inhibitor z-LEHD-fmk in a rat model of traumatic spinal cord injury. *J Neurosurg Spine.* 2005 Mar; 2(3): 327-34.

Mocanu MM, et, al. Caspase inhibition and limitation of myocardial infarct size: protection against lethal reperfusion injury. *Br J Pharmacol.* 2000 May; 130(2): 197-200.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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