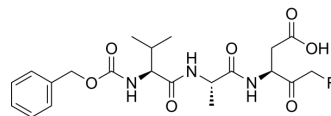


Z-VAD-FMK

Cat. No.:	HY-16658B
CAS No.:	161401-82-7
Molecular Formula:	C ₂₁ H ₂₈ FN ₃ O ₇
Molecular Weight:	453.46
Target:	Caspase
Pathway:	Apoptosis
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (220.53 mM; Need ultrasonic)					
		Solvent Concentration	Mass			
	Preparing Stock Solutions			1 mg	5 mg	10 mg
		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	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.59 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.08 mg/mL (4.59 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.59 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Z-VAD-FMK (Z-VAD(OH)-FMK) is a well-know pan caspase inhibitor, which does not inhibit ubiquitin carboxy-terminal hydrolase L1 (UCHL1) activity even at concentrations as high as 440 μM ^[1] .
IC₅₀ & Target	Caspase
In Vitro	Z-VAD-FMK (40 μM) reverses the apoptotic effect exerted by total saponin of Solanum lyratum Thunb (TSSLT) in Hela cells. HeLa cells are pretreated with Z-VAD-FMK (40 μM) for 30 min and exposed to TSSLT (6 μg/mL) for 48 h ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[2]

Cell Line:	HeLa cells
Concentration:	40 μ M
Incubation Time:	Prtreated for 30 minutes
Result:	Prevented TSSLT-induced cell death. More than 80% cell survival was observed.

CUSTOMER VALIDATION

- Science. 2021 Mar 5;371(6533):eabb2224.
- Nat Microbiol. 2022 Jul;7(7):1041-1053.
- Nat Cell Biol. 2023 Jun;25(6):836-847.
- Adv Funct Mater. 2023 May 14.
- Bioact Mater. 2021 Nov 19;13:23-36.

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REFERENCES

[1]. Davies CW, et al. The co-crystal structure of ubiquitin carboxy-terminal hydrolase L1 (UCHL1) with a tripeptide fluoromethyl ketone (Z-VAE(OMe)-FMK). Bioorg Med Chem Lett. 2012 Jun 15;22(12):3900-4.

[2]. Liu HR, et al. Antiproliferative activity of the total saponin of Solanum lyratum Thunb in Hela cells by inducing apoptosis. Pharmazie. 2008 Nov;63(11):836-42.

Caution: Product has not been fully validated for medical applications. For research use only.

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