Ac-DEVD-CMK

Cat. No.: HY-P0034

CAS No.: 285570-60-7

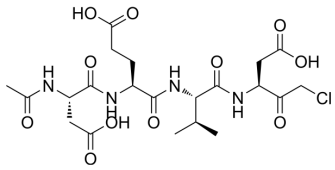
Molecular Formula: $C_{21}H_{31}ClN_4O_{11}$

Molecular Weight: 550.94

Target: Caspase; Apoptosis

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Ac-DEVD-CMK (Caspase-3 Inhibitor III) is a selective and irreversible caspase-3 inhibitor. Ac-DEVD-CMK significantly inhibits apoptosis induced by high levels of glucose or 3,20-dibenzoate (IDB; HY-137295). Ac-DEVD-CMK can be used in a variety of experimental approaches to inhibit apoptosis[1][2][3].

IC_{50} & Target

Caspase-3

In Vitro

Ac-DEVD-CMK (100 μM; 24 h) inhibits IDB-induced apoptosis[3].

Ac-DEVD-CMK inhibits (10 μM; 36 h) inhibits citrate (10 mM)-induced p21 cleavage and G2/M accumulation in human pharyngeal squamous carcinoma FaDu and Detroit 562 cell lines[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[3]

Cell Line:	Jurkat cells
Concentration:	100 μM
Incubation Time:	24 h
Result:	Inhibited ingenol IDB (10 μM)-induced apoptosis.

In Vivo

Ac-DEVD-CMK (Caspase-3 Inhibitor III; 25 mg/kg; IP; single dose; 3 hours post-APAP) significantly attenuates Acetaminophen (APAP; HY-66005)-induced liver injury (AILI)[5].

Ac-DEVD-CMK (25 mg/kg; ip; single dose) significantly attenuates APAP-induced liver injury (AILI) in susceptible $Sdc1^{-/-}$ mice [6].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6- to 8-week-old females and males $Sdc1^{-/-}$ mice[4]
Dosage:	25 mg/kg
Administration:	IP; single dose; 3 hours post-APAP
Result:	Significantly attenuated APAP (ip; 500 or 625 mg/kg)-induced liver injury (AILI), indicating

	that inhibition of GSK-3β or caspase-3 activity mitigates liver damage.

REFERENCES

[1]. Lu Cai, et al. Hyperglycemia-induced apoptosis in mouse myocardium: mitochondrial cytochrome C-mediated caspase-3 activation pathway. Diabetes. 2002 Jun;51(6):1938-48.

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

[3]. M Blanco-Molina, et al. Ingenol esters induce apoptosis in Jurkat cells through an AP-1 and NF-kappaB independent pathway. Chem Biol. 2001 Aug;8(8):767-78.

[4]. Eon Jeong Nam, et al. Syndecan-1 limits the progression of liver injury and promotes liver repair in acetaminophen-induced liver injury in mice. Hepatology. 2017 Nov;66(5):1601-1615.

[5]. Hung KC, et al. Citrate-Induced p85αPTEN Complex Formation Causes G2/M Phase Arrest in Human Pharyngeal Squamous Carcinoma Cell Lines. Int J Mol Sci. 2019 Apr 29;20(9):2105.

[6]. Nam EJ, et al. Syndecan-1 limits the progression of liver injury and promotes liver repair in acetaminophen-induced liver injury in mice. Hepatology. 2017 Nov;66(5):1601-1615.

[7]. Eon Jeong Nam, et al. Syndecan-1 limits the progression of liver injury and promotes liver repair in acetaminophen-induced liver injury in mice. Hepatology. 2017 Nov;66(5):1601-1615.

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