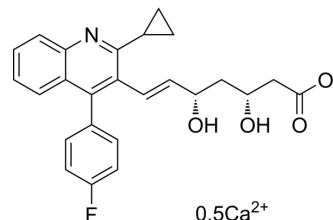


Pitavastatin Calcium

Cat. No.:	HY-B0144
CAS No.:	147526-32-7
Molecular Formula:	C ₂₅ H ₂₃ Ca _{0.5} FNO ₄
Molecular Weight:	440.49
Target:	HMG-CoA Reductase (HMGCR); Autophagy; Mitophagy; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Autophagy; 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 : ≥ 50 mg/mL (113.51 mM)
* "≥" means soluble, but saturation unknown.

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.2702 mL	11.3510 mL	22.7020 mL
	5 mM	0.4540 mL	2.2702 mL	4.5404 mL
	10 mM	0.2270 mL	1.1351 mL	2.2702 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (5.68 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.68 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.68 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pitavastatin Calcium (NK-104 hemicalcium) is a potent hydroxymethylglutaryl-CoA (HMG-CoA) reductase inhibitor. Pitavastatin Calcium (NK-104 hemicalcium) inhibits cholesterol synthesis from acetic acid with an IC₅₀ of 5.8 nM in HepG2 cells. Pitavastatin Calcium is an efficient hepatocyte low-density lipoprotein-cholesterol (LDL-C) receptor inducer. Pitavastatin Calcium also possesses anti-atherosclerotic, anti-asthmatic, anti-osteoarthritis, antineoplastic, neuroprotective, hepatoprotective and reno-protective effects^{[1][2][3][8]}.

IC₅₀ & Target

HMG-CoA Reductase^[1]

In Vitro

Pitavastatin Calcium inhibits the growth of a panel of ovarian cancer cells, including those considered most likely to represent HGSOc, grown as a monolayers (IC₅₀=70.4-57µM) or as spheroids (IC₅₀=0.6-47µM)^[3].
Pitavastatin Calcium (1 µM; 48 hours) induces apoptosis, evidenced by the increased activity of executioner caspases-3,7 as well as caspase-8 and caspase-9 in Ovar-8 cells and Ovar-3 cells^[3].
Pitavastatin (17µM, 48hours) causes PARP cleavage in Ovar-8 cells^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Western Blot Analysis^[3]

Cell Line:	Ovar-8 cells
Concentration:	1 µM
Incubation Time:	48 hours
Result:	Induced PARP cleavage.

In Vivo

Pitavastatin Calcium (59mg/kg; p.o.; twice daily for 28 days) causes significant tumour regression^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	4 week old female NCR Nu/Nu female mice (bearing Ovar-4 tumours) ^[3]
Dosage:	59 mg/kg
Administration:	p.o.; twice daily for 28 days
Result:	Caused significant tumour regression.

CUSTOMER VALIDATION

- J Hepatol. 2021 Aug;75(2):363-376.
- Acta Pharm Sin B. 2020 May;10(5):850-860.
- Biochem Pharmacol. 2019 Nov;169:113612.
- Proteomics. 2023 May 4;e2300041.

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- [2]. Hamano T, et al. Pitavastatin decreases tau levels via the inactivation of Rho/ROCK. Neurobiol Aging. 2012 Oct;33(10):2306-20.
- [3]. de Wolf E, et al. Dietary geranylgeraniol can limit the activity of pitavastatin as a potential treatment for drug-resistant ovarian cancer. Sci Rep. 2017 Jul 14;7(1):5410.
- [4]. Demir B, et al. The Effects of Pitavastatin on Nuclear Factor-Kappa B and ICAM-1 in Human Saphenous Vein Graft Endothelial Culture. Cardiovasc Ther. 2019 May 2;2019:2549432.
- [5]. Hayashi T, et al. A new HMG-CoA reductase inhibitor, pitavastatin remarkably retards the progression of high cholesterol induced atherosclerosis in rabbits. Atherosclerosis. 2004 Oct;176(2):255-63.
- [6]. Sahebkar A, et al. A comprehensive review on the lipid and pleiotropic effects of pitavastatin. Prog Lipid Res. 2021 Nov;84:101127.
- [7]. Mukhtar RY, et al. Pitavastatin. Int J Clin Pract. 2005 Feb;59(2):239-52.

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

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