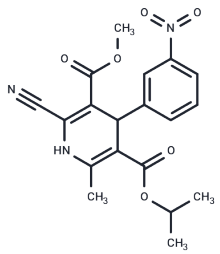
Data Sheet (Cat.No.T1422)

TargetMol

Nilvadipine

Chemical Properties



CAS No. : 75530-68-6

Formula: C19H19N3O6

Molecular Weight: 385.37

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Nilvadipine (FK235), a calcium channel blocker (CCB), is utilized for treatment of hypertension.
Targets(IC50)	Calcium Channel
In vitro	In RCS rats' retinas, Nilvadipine significantly increased the expression of rhodopsin kinase and αA-crystallin, while it decreased the expression of caspase-1 and caspase-2. It also entirely inhibited arterial vasoactivity induced by Abeta in rat aortas and human brains. Furthermore, Nilvadipine (0.4 mg/kg i.v. and 2 mg/kg p.o.) was able to reduce paw edema induced by localized ischemia in mice.
In vivo	In perfused hydronephrotic kidneys, Nilvadipine effectively dilates both afferent and efferent arterioles, enhancing renal blood flow. Moreover, in rat aortic smooth muscle cells (IC50=0.1 nM), Nilvadipine inhibits the chemotactic responses to interleukin-1, leukotriene B4, and platelet-derived growth factor.

Solubility Information

Solubility	Ethanol: 19.3 mg/mL (50.08 mM),Sonication is recommended. DMSO: 55 mg/mL (142.72 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.5 mg/mL (6.49 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5949 mL	12.9745 mL	25.9491 mL
5 mM	0.519 mL	2.5949 mL	5.1898 mL
10 mM	0.2595 mL	1.2975 mL	2.5949 mL
50 mM	0.0519 mL	0.2595 mL	0.519 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

Nomoto A, et al. Atherosclerosis, 1988, 72(2-3), 213-219.
Ozawa Y, et al. J Cardiovasc Pharmacol, 1999, 33(2), 243-247.
Yamazaki H, et al. Invest Ophthalmol Vis Sci, 2002, 43(4), 919-926.
Paris D, et al. Brain Res, 2004, 1999(1), 53-61.
Oyanagui Y, et al. Arzneimittelforschung, 1991, 41(5), 469-474.