

Nilvadipine

Catalog No: tcsc2608



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 500mg



Specifications

CAS No:

75530-68-6

Formula:

$C_{19}H_{19}N_3O_6$

Pathway:

Membrane Transporter/Ion Channel

Target:

Calcium Channel

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 50 mg/mL (129.75 mM)

Alternative Names:

FK235;FR34235

Observed Molecular Weight:

385.37

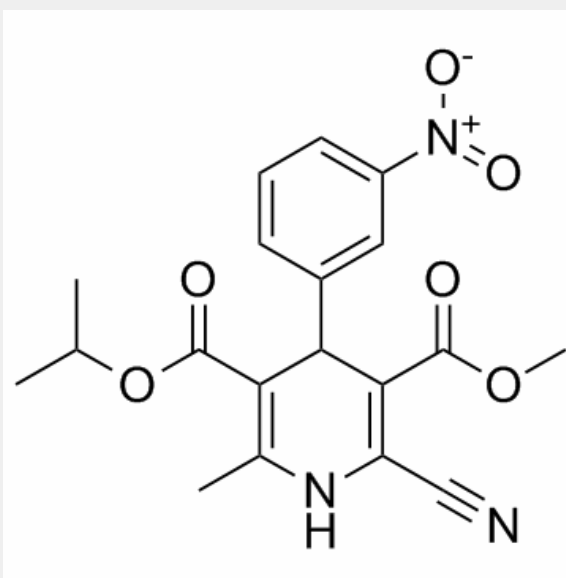
Product Description

Nilvadipine is a potent **calcium channel** antagonist, and the **IC₅₀** value is around 0.1 nM.

IC50 & Target: IC50: 0.1 nM (Calcium channel)^[1]

In Vitro: In an in vitro experiment on inhibition of migration of rat aortic smooth muscle cells, using Zymosan-activated air pouch exudate as a chemoattractant in modified Boyden chambers. The IC₅₀ value is 0.033 nM for Nilvadipine (FR34235). Effects of Nilvadipine on proliferation of rat aortic smooth muscle cells and rabbit platelet aggregation is also examined. Nilvadipine should be useful for preventing and treating atherosclerosis. Inhibition of smooth muscle cell migration is thought to be its mechanism of antiatherogenic activity^[2]. The antioxidant effect of calcium antagonist Nilvadipine is studied by means of rat myocardial membrane lipid peroxidation with a nonenzymatic active oxygen-generating system (DHF/FeCl₃-ADP) with IC₅₀ of 25.1 μM. Nilvadipine shows antioxidant effects both before and after the addition of active oxygen, and reduces the dihydroxyfumarate (DHF) auto-oxidation rate, is chain-breaking and preventive antioxidants. Nicardipine, which shows an antioxidant effect only before exposure to active oxygen and reduced the DHF auto-oxidation rate, is mainly a preventive antioxidant^[3].

In Vivo: The antiatherogenic activity of Nilvadipine (FR34235), a calcium antagonist, is examined in rabbits with carotid arteries sheathed with polyethylene cuffs, and compared with that of Nifedipine, Verapamil and Diltiazem. Nilvadipine is given intramuscularly in daily doses of 0.01-10 mg/kg for 3 weeks, starting on the day of cuff-placement. FR34235 dose-dependently inhibits the cuff-induced intimal thickening^[2]. Nilvadipine affords significant protection against thinning of retinal layers in the RCS rat during retinal degeneration. Electron microscopy shows that marked irregularity in the photoreceptor OS in the untreated retina^[4].



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