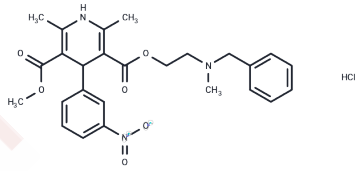
Data Sheet (Cat.No.T1215)

TargetMol

Nicardipine hydrochloride

Chemical Properties



CAS No. : 54527-84-3

Formula: C26H30ClN3O6

Molecular Weight: 515.99

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Nicardipine hydrochloride (YC-93 Hydrochloride) is the hydrochloride salt form of nicardipine, a synthetic derivative of nitrophenyl-pyridine and potent calcium channel blocker, Nicardipine (Nifedipine Family) blocks calcium ions from certain cell walls and inhibits contraction of coronary and peripheral arteries, resulting in lowered oxygen requirements for heart muscle and decreased arterial contraction and spasm. It is used clinically as a cerebral and coronary vasodilator.
Targets(IC50)	Calcium Channel,Adrenergic Receptor,AChR,Autophagy
In vitro	Nicardipine significantly reduced systolic blood pressure in spontaneously hypertensive rats. In spontaneously hypertensive rats, Nicardipine significantly decreased the intima-media thickness and increased the lumen area at the level of cerebral arteries and small molluscum arteriosum.Nicardipine increased the number of neurons in the occipital cortex and frontal cortex in the SHR and inhibited the proliferation and hypertrophy of GFAP-positive astrocytes.Nicardipine also increased the number of neurons in the CA1 area of the hippocampus. increase in the number of neurons in the CA1 region of the hippocampus and reduced the size and number of astrocytes in gray and white matter. Nicardipine (5 mg/kg) in combination with flunarizine (80 mg/kg) and nimodipine (80 mg/kg) significantly potentiated the protective effect of ethosuximide (50 mg/kg) or valproic acid (100 mg/kg) against clonic seizures in mice. Nicardipine (40 mg/kg, 2 times/day for 8 weeks) reduced plaque area by 49.2% in rabbits (cholesterol-fed). Nicardipine (40 mg/kg) reduced aortic cholesterol accumulation in cholesterol-fed rabbits by 74.5%.Nicardipine (100 mg/kg) caused a significant transient reduction in cat Nicardipine (100 mg/kg) caused a significant transient reduction in retinal blood flow in cats. Although Nicardipine (100 mg/kg) decreased mean arterial blood pressure in cats, it significantly increased blood flow to the ONH, suggesting that Nicardipine benefits optic nerve hypoplasia tissue.

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 45 mg/mL (87.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.938 mL	9.6901 mL	19.3802 mL
5 mM	0.3876 mL	1.938 mL	3.876 mL
10 mM	0.1938 mL	0.969 mL	1.938 mL
50 mM	0.0388 mL	0.1938 mL	0.3876 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.

Reference

Harino S, et al. Invest Ophthalmol Vis Sci, 1992, 33(10), 2885-2890.
Wang B, Pei J, Zhang H, et al.Dihydropyridine-derived calcium channel blocker as a promising anti-hantavirus entry inhibitor.Interventions for emerging infectious diseases.2023, 16648714.
Amenta F, et al. J Hypertens Suppl, 1996, 14(3), S29-35.
Willis AL, et al. Arteriosclerosis, 1985, 5(3), 250-255.
Gasior M, et al. J Neural Transm, 1996, 103(7), 819-831.