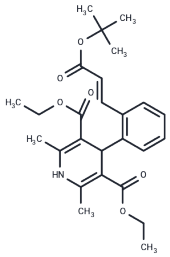
Data Sheet (Cat.No.T1439)

TargetMol

Lacidipine

Chemical Properties



CAS No. : 103890-78-4

Formula: C26H33NO6

Molecular Weight: 455.54

Appearance: no data available

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

Biological Description

Description	Lacidipine (SN-305) is a lipophilic dihydropyridine calcium antagonist with an intrinsically slow onset of activity. Due to its long duration of action, lacidipine does not lead to reflex tachycardia. It displays specificity in the vascular smooth muscle, where it acts as an antihypertensive agent to dilate peripheral arterioles and reduce blood pressure.
Targets(IC50)	Apoptosis,Calcium Channel,Reactive Oxygen Species
In vitro	Lacidipine, an L-type Ca(2+) channel blocker that also inhibits [Ca(2+)](ER) efflux, enhances folding, trafficking, and activity of degradation-prone glucocerebrosidase (GC) variants. Lacidipine remodels mutated GC proteostasis by simultaneously activating a series of distinct molecular mechanisms, namely modulation of Ca(2+) homeostasis, upregulation of the ER chaperone BiP, and moderate induction of the unfolded protein response. [1] Lacidipine almost completely inhibits cholesterol esterification in cholesterol loaded mouse cultured peritoneal macrophages. [2]
In vivo	Lacidipine has non-significant effects on blood pressure but inhibits the paradoxical increases in plasma renin activity (PRA) and in renin mRNA in kidney that are found in salt-loaded stroke-prone spontaneously hypertensive rats (SHRSP). Lacidipine restores the physiological downregulation of renin production by high salt and reduces left ventricular hypertrophy and mRNA levels of atrial natriuretic factor and transforming growth factor-beta1. [3] Lacidipine (1 and 3 mg/kg) also effectively increases calcium concentrations significantly in ovariectomized rats. [4] Lacidipine, a dihydropyridine-type calcium antagonist, reduces the cardiac hypertrophy and the cardiacendothelin-1 (ET-1) gene overexpression occurring in salt-loaded stroke-prone spontaneously hypertensive rats (SL-SHRSP), an effect occurring without systolic blood pressure (SBP) change. Lacidipine exerts a dose-related inhibition of ventricle hypertrophy and preproET-1-mRNA expression in SHRSP and indicate that this effect is unrelated to SBP changes. [5]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 84 mg/mL (184.4 mM),Sonication is recommended. Ethanol: 21 mg/mL (46.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1952 mL	10.976 mL	21.952 mL
5 mM	0.439 mL	2.1952 mL	4.3904 mL
10 mM	0.2195 mL	1.0976 mL	2.1952 mL
50 mM	0.0439 mL	0.2195 mL	0.439 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

Wang F, et al. Chem Biol,2011, 18(6), 766-776.
Bernini F, et al. Br J Pharmacol,1997, 122(6), 1209-1215.
Kyselovic J, et al. Br J Pharmacol,2001, 134(7), 1516-1522.
Halici Z, et al. Eur J Pharmacol,2008, 579(1-3), 241-245.
Feron O, et al. Br J Pharmacol,1996, 118(3), 659-664.