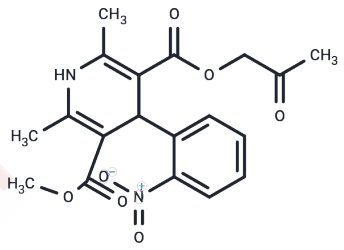
Data Sheet (Cat.No.T5376)

TargetMol

Aranidipine

Chemical Properties



CAS No. : 86780-90-7

Formula: C19H20N2O7

Molecular Weight: 388.37

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Aranidipine (MPC1304) (MPC1304) is a calcium channel antagonist with potent and long-lasting antihypertensive effects.
Targets(IC50)	Calcium Channel
In vitro	In myocytes, aranidipine (10 nmol/l to 1 micromol/l) concentration-dependently decreased T-type and L-type Ca(2+) currents. Aranidipine (1 micromol/l) had little effect on K(+) currents. In the sinoatrial node, 0.1 micromol/l aranidipine increased cycle length and decreased +V(max) and the slope of the phase 4 depolarization [1].
In vivo	At 1 and 6 h after oral administration of MPC-1304 (10 mg/kg) in spontaneously hypertensive rats (SHR), there was significant decrease (48%) in the number of [3H](+)-PN 200-110 binding sites (Bmax) in myocardial membranes compared to control values. The in vivo specific binding of [3H](+)-PN 200-110 in particulate fractions of aorta of SHR was significantly reduced (74.8 and 37.9%, respectively) at 1 and 6 after oral administration of MPC-1304 (3 mg/kg), while the myocardial [3H](+)-PN 200-110 binding was decreased only at 1 h later [2].

Solubility Information

Solubility	DMSO: 22.5 mg/mL (57.93 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 mg/mL (5.15 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	2.5749 mL	12.8743 mL	25.7486 mL
5 mM	0.515 mL	2.5749 mL	5.1497 mL
10 mM	0.2575 mL	1.2874 mL	2.5749 mL
50 mM	0.0515 mL	0.2575 mL	0.515 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

Masumiya H, et al. Inhibition of T-type and L-type Ca(2+) currents by aranidipine, a novel dihydropyridine Ca(2+) antagonist. Pharmacology. 2000 Aug;61(2):57-61.
Nozawa Y, et al. Receptor occupation and pharmacokinetics of MPC-1304, a new Ca2+ channel antagonist, in spontaneously hypertensive rats. Eur J Pharmacol. 1995 Dec 12;287(2):191-6.