Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Nifedipine

Catalog No: tcsc2296

Available Sizes

Size: 1g

Size: 5g

Size: 10g

Specifications

CAS No:
21829-25-4

Formula:
$C_{17}H_{18}N_2O_6$

Pathway:
Membrane Transporter/Ion Channel;Autophagy

Target:
Calcium Channel;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 116.7 mg/mL (336.96 mM)

Alternative Names:
BAY-a-1040

Observed Molecular Weight:
346.33

Product Description

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Nifedipine is a potent **calcium channel** blocker and drug of choice for cardiac insufficiencies.

In Vitro: Nifedipine (100 μM) significantly lowers the viability of the WKPT-0293 Cl.2 Cells, and treatment of nifedipine (10 or 100 μM) plus FAC induces a significant reduction in cell viability, but there are no significant differences in viability between the control cells and the cells treated with 100 μM of FAC or 1 and 10 μM of nifedipine. Nifedipine (1, 10, or 100 μM) significantly increases iron level in WKPT-0293 Cl.2 cells. Nifedipine treatment also increases expression of TfR1, DMT1+IRE and DMT1-IRE in WKPT-0293 Cl.2 cells. In addition, co-treatment with nifedipine (100 μM) and FAC (100 μM) increases TfR1, DMT1+IRE and DMT1-IRE expression in WKPT-0293 Cl.2 cells[2]. Nifedipine plus ritodrine produces a significantly greater inhibition of contractility than each drug alone in the midrange of concentrations. The combination of nifedipine plus nitroglycerin or nifedipine plus atosiban produces a significantly greater inhibition than nitroglycerin or atosiban alone but not greater than nifedipine. The combination of nifedipine plus NS-1619 (Ca^{2+}-activated K^+ [BKCa] channel opener) reduces the inhibitory effect of each drug[3]. Nifedipine (2 μM) significantly inhibits *P. capsici* mycelial growth and sporulation. Nifedipine-induced inhibition of mycelial growth is calcium-dependent. Nifedipine (0.5 μM) increases *P. capsici* sensitivity to H_2O_2 in a calcium-dependent manner. Nifedipine inhibition of *P. capsici* virulence and expression of genes involved in pathogenicity[4].

In Vivo: In Nifedipine (50 mg/kg)- and CsA-treated rats, the BL dimensions (BLi and BLk), MD dimensions (MDk) and vertical dimensions (VHi and VHk) are significantly increased (P [1].