

# 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 :  $\geq 116.7$  mg/mL (336.96 mM)

### Alternative Names:

BAY-a-1040

### Observed Molecular Weight:

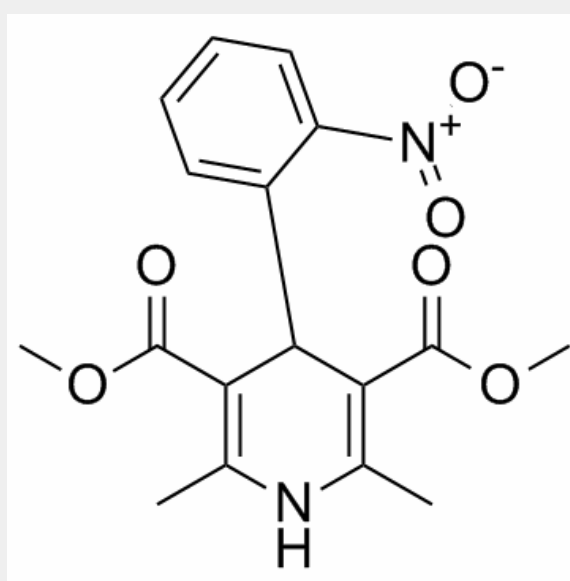
346.33

## Product Description

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

**In Vitro:** Nifedipine (100  $\mu$ M) significantly lowers the viability of the WKPT-0293 Cl.2 Cells, and treatment of nifedipine (10 or 100  $\mu$ M) 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  $\mu$ M of FAC or 1 and 10  $\mu$ M of nifedipine. Nifedipine (1, 10, or 100  $\mu$ M) 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  $\mu$ M) and FAC (100  $\mu$ M) increases TfR1, DMT1+IRE and DMT1-IRE expression in WKPT-0293 Cl.2 cells<sup>[2]</sup>. 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<sup>2+</sup>-activated K<sup>+</sup> [BKCa] channel opener) reduces the inhibitory effect of each drug<sup>[3]</sup>. Nifedipine (2  $\mu$ M) significantly inhibits *P. capsici* mycelial growth and sporulation. Nifedipine-induced inhibition of mycelial growth is calcium-dependent. Nifedipine (0.5  $\mu$ M) increases *P. capsici* sensitivity to H<sub>2</sub>O<sub>2</sub> in a calcium-dependent manner. Nifedipine inhibition of *P. capsici* virulence and expression of genes involved in pathogenicity<sup>[4]</sup>.

**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]).



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!