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DATASHEET

Nifedipine

Product overview

Name	Nifedipine
Cat No	HB1228
Biological action	Blocker
Purity	>98%
Description	L-type Ca^{2+} channel blocker

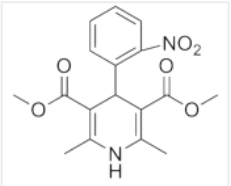
Biological Data

Biological description	L-type Ca^{2+} channel blocker. Causes down regulation of NF-κB, proinflammatory cytokines and cell adhesion molecules. Reduces oxidative stress and smooth muscle cell proliferation and shows potential actions against atherosclerosis. Shows neuroprotective actions for dopaminergic neurones and acts as a vasodilator.

Solubility & Handling

Storage instructions	+4°C (desiccate)
Solubility overview	Soluble in DMSO (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	1,4-Dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylicaciddimethylester
Molecular Weight	346.34
Chemical structure	
Molecular Formula	$C_{17}H_{18}N_2O_6$
CAS Number	21829-25-4
PubChem identifier	4485
SMILES	CC1=C(C(C(=C(N1)C)C(=O)OC)C2=CC=CC=C2[N+](=O)[O-])C(=O)OC
InChi	InChI=1S/C17H18N2O6/c1-9-13(16(20)24-3)15(14(10(2)18-9)17(21)25-4)11-7-5-6-8-12(11)19(22)23/h5-8,15,18H,1-4H3
InChiKey	HYIMSNHJOBLJNT-UHFFFAOYSA-N
MDL number	MFCD00057326
Appearance	Yellow solid

References

Nifedipine and nimodipine protect dopaminergic substantia nigra neurons against axotomy-induced cell death in rat vibrosections via modulating inflammatory responses.

Daschil N *et al* (2014) Brain Res 1581
PubMedID 25038562

Nifedipine inhibits hypoxia induced transvascular leakage through down regulation of NFkB.

S K S S *et al* (2012) Respir Physiol Neurobiol 183(1)
PubMedID 22627105

Nifedipine inhibits vascular smooth muscle cell proliferation and reactive oxygen species production through AMP-activated protein kinase signaling pathway.

Sung JY *et al* (2012) Vascul Pharmacol 56(1-2)
PubMedID 21708289