Catalog # 10-3035

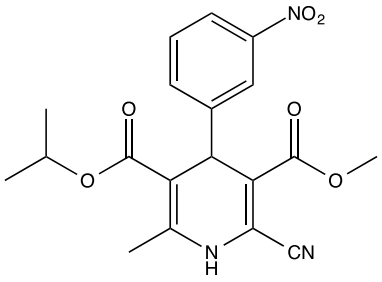
Nilvadipine

CAS# 75530-68-6

2-Cyano-1,4-dihydro-6-methyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid 3-methyl 5-(1-methylethyl) ester

FR34235

Lot # X106854



A novel DHP L-type Ca^{2+} channel blocker that also inhibits Syk.[1] Blocks Aβ production, APPβ secretion and reduces BACE-1 expression in CHO cells over-expressing Aβ *in vitro*. Enhances clearance of Aβ across the blood brain barrier *in vivo*. Reduces brain Aβ levels in a mouse tauopathy model.[1] Clinically useful antihypertensive agent.[2] Has been shown to prevent cognitive decline in some clinical trials.[3] Produces a protective effect on glutamate neurotoxicity in retinal ganglion cells, an effect not shared by other L-type Ca^{2+} channel blockers such as nifedipine and diltiazem.[4]

1) Paris *et al.* (2014), *The spleen tyrosine kinase (Syk) regulates Alzheimer amyloid-β production and Tau hyperphosphorylation*; J.Biol.Chem. **289** 33927
2) Rosenthal (1994), *Nilvadipine: profile of a new calcium antagonist. An overview;* J.Cardiovasc.Pharmacol. **24** Suppl 2:S92
3) Nimmrich and Eckert (2013), *Calcium channel blockers and dementia;* Br.J.Pharmacol. **169** 1203
4) Otori *et al.* (2003), *Protective effect of nilvadipine against glutamate neurotoxicity in purified retinal ganglion cells;* Brain Res. **961** 213

PHYSICAL DATA

Molecular Weight:	385.38
Molecular Formula:	$C_{19}H_{19}N_3O_6$
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml) or ethanol (15 mg/ml)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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