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- Trockeneiszuschlag
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- Expressversand

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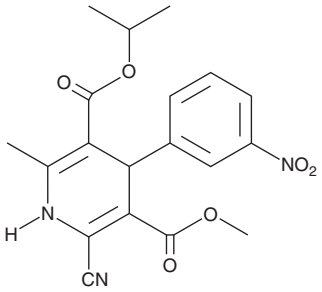
PRODUCT INFORMATION

Nilvadipine

Item No. 21243

CAS Registry No.:	75530-68-6
Formal Name:	2-cyano-1,4-dihydro-6-methyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-methyl 5-(1-methylethyl) ester
Synonyms:	CL 287,389, FK-235, FR34235, (±)-Nilvadipine, SKF 102362
MF:	$C_{19}H_{19}N_3O_6$
FW:	385.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 240, 377 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Nilvadipine is supplied as a crystalline solid. A stock solution may be made by dissolving the nilvadipine in the solvent of choice, which should be purged with an inert gas. Nilvadipine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of nilvadipine in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Nilvadipine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nilvadipine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Nilvadipine has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Nilvadipine is a dihydropyridine L-type calcium channel blocker.[1] It is selective for L-type over N-, P/Q-, and R-type calcium channels at 10 µM. Nilvadipine (10 mg/kg per day, p.o.) inhibits increases in systolic blood pressure induced by chronic intravenous infusion of the peptide vasoconstrictor endothelin in rats.[2] It decreases cortical and hippocampal amyloid-β burden in the APPsw (Tg2576) and PS1/APPsw transgenic mouse models of Alzheimer's disease when administered at a dose of 0.03% (w/w) in the diet for 17 and 10 months, respectively.[3] Nilvadipine (3.2 mg/kg, s.c.) reduces infarct volume in a rat model of focal cerebral ischemia induced by middle cerebral artery occlusion (MCAO).[4]

References

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2. Yasujima, M., Abe, K., Kanazawa, M., *et al.* Antihypertensive effect of captopril and enalapril in endothelin-infused rats. *Tohoku J. Exp. Med.* **163(3)**, 219-227 (1991).
3. Paris, D., Bachmeier, C., Patel, N., *et al.* Selective antihypertensive dihydropyridines lower Aβ accumulation by targeting both the production and the clearance of Aβ across the blood-brain barrier. *Mol. Med.* **17(3-4)**, 149-162 (2011).
4. Kawamura, S., Yasui, N., Shirasawa, M., *et al.* Effects of a Ca^{2+} entry blocker (nilvadipine) on acute focal cerebral ischemia in rats. *Exp. Brain Res.* **83(2)**, 434-438 (1991).

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