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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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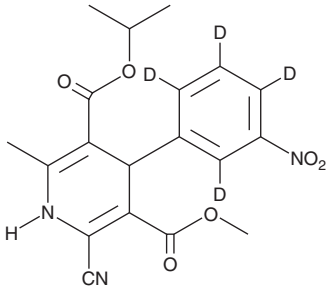
PRODUCT INFORMATION

Nilvadipine-d_4

Item No. 33700

Formal Name:	2-cyano-1,4-dihydro-6-methyl-4-(3-nitrophenyl-d_4)-3,5-pyridinedicarboxylic acid, 3-methyl 5-(1-methylethyl) ester
Synonym:	(±)-Nilvadipine-d_4
MF:	$C_{19}H_{15}D_4N_3O_6$
FW:	389.4
Chemical Purity:	≥95% (Nilvadipine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as:	A 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-d_4 is intended for use as an internal standard for the quantification of nilvadipine (Item No. 21243) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Nilvadipine-d_4 is supplied as a solid. A stock solution may be made by dissolving the nilvadipine-d_4 in the solvent of choice, which should be purged with an inert gas. Nilvadipine-d_4 is soluble in methanol, DMSO, and dimethyl formamide.

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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