

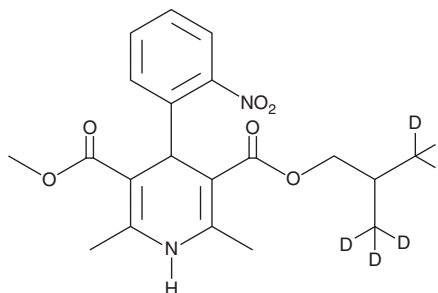
PRODUCT INFORMATION



Nisoldipine-d₆

Item No. 31785

CAS Registry No.: 1285910-03-3
Formal Name: 3-methyl 5-(2-(methyl-d₃)propyl-3,3,3-d₃) 2,6-dimethyl-4-(2-nitrophenyl)-1,4-dihydropyridine-3,5-dicarboxylate
MF: C₂₀H₁₈D₆N₂O₆
FW: 394.5
Chemical Purity: ≥98% (Nisoldipine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Nisoldipine-d₆ is intended for use as an internal standard for the quantification of nisoldipine (Item No. 20998) 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).

Nisoldipine-d₆ is supplied as a solid. A stock solution may be made by dissolving the nisoldipine-d₆ in the solvent of choice, which should be purged with an inert gas. Nisoldipine-d₆ is soluble in the organic solvent acetonitrile.

Description

Nisoldipine is a calcium channel inhibitor.¹ It binds to calcium channels in isolated rat ventricular membranes ($K_d = 0.04$ nM) and inhibits calcium uptake by smooth muscle cells.^{1,2} Nisoldipine inhibits acetylcholine-induced contraction of isolated rabbit coronary arteries ($IC_{50} = 0.03$ nM).¹ *In vivo*, nisoldipine (3 mg/kg) reduces ventricular tachycardia and fibrillation and increases survival in a rat model of ventricular arrhythmias induced by myocardial ischemia.³ Dietary administration of nisoldipine (50-100 mg/kg) reduces systolic blood pressure in spontaneously hypertensive rats.⁴ Formulations containing nisoldipine have been used in the treatment of hypertension.

References

1. Knorr, A. The pharmacology of nisoldipine. *Cardiovasc. Drugs Ther.* **1**(4), 393-402 (1987).
2. Janis, R.A., Shrikhande, A.V., Greguski, R., et al. Review of nisoldipine binding studies. *Nisoldipine 1987*. Hugenoltz, P.G., and Meyer, J., editors, 1st edition, *Springer-Verlag* (1987).
3. Fagbemi, O. and Parratt, J.R. Suppression by orally-administered nifedipine, nisoldipine and niludipine of early, life-threatening ventricular arrhythmias resulting from acute myocardial ischaemia. *Br. J. Pharmacol.* **74**(1), 12-14 (1981).
4. Stasch, J.-P., Kazda, S., Hirth, C., et al. Role of nisoldipine on blood pressure, cardiac hypertrophy, and atrial natriuretic peptides in spontaneously hypertensive rats. *Hypertension* **10**(3), 303-307 (1987).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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