

PRODUCT INFORMATION



Cilnidipine-d₇ Item No. 33796

Formal Name: 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-(2-methoxyethyl-d₇) 5-[(2E)-3-phenyl-2-propen-1-yl] ester

MF: C₂₇H₂₁D₇N₂O₇

FW: 499.6

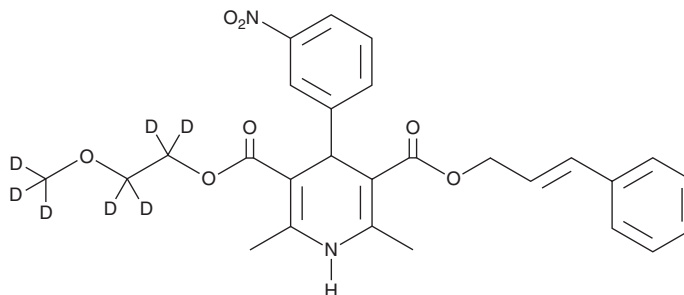
Chemical Purity: ≥98% (Cilnidipine)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀

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

Cilnidipine-d₇ is intended for use as an internal standard for the quantification of cilnidipine (Item No. 26080) 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).

Cilnidipine-d₇ is supplied as a solid. A stock solution may be made by dissolving the cilnidipine-d₇ in the solvent of choice, which should be purged with an inert gas. Cilnidipine-d₇ is soluble in methanol and DMSO.

Description

Cilnidipine is a dihydropyridine calcium channel blocker that blocks L- and N-type high-voltage-activated calcium currents in rat hippocampal CA1 pyramidal neurons when used at a concentration of 10 μM.¹ Cilnidipine (3 mg/kg) reduces the pressor response to acute cold stress, as well as mean blood pressure, in spontaneously hypertensive rats.² It dose-dependently reduces mean blood pressure and cerebral vascular resistance without affecting cerebral blood flow in anesthetized rats at doses ranging from 3-100 μg/kg.³ Cilnidipine (100 μg/kg, i.p.) reduces cerebral infarction area in a rat model of focal brain ischemia.

References

1. Murai, Y., Uneyama, H., Ishibashi, H., *et al.* Preferential inhibition of L- and N-type calcium channels in the rat hippocampal neurons by cilnidipine. *Brain Res.* **854(1-2)**, 6-10 (1999).
2. Hosono, M., Hiruma, T., Watanabe, K., *et al.* Inhibitory effect of cilnidipine on pressor response to acute cold stress in spontaneously hypertensive rats. *Jpn. J. Pharmacol.* **69(2)**, 119-125 (1995).
3. Takahara, A., Konda, T., Enomoto, A., *et al.* Neuroprotective effects of a dual L/N-type Ca²⁺ channel blocker cilnidipine in the rat focal brain ischemia model. *Biol. Pharm. Bull.* **27(9)**, 1388-1391 (2004).

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.

WARRANTY AND LIMITATION OF REMEDY

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