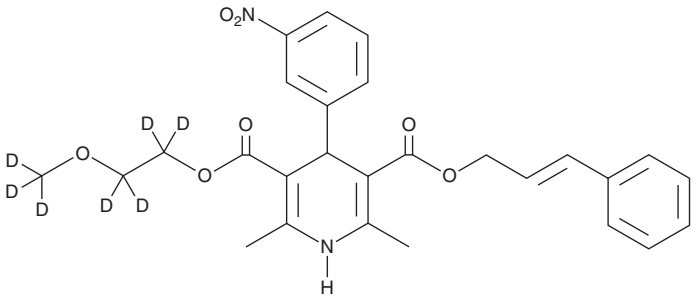
PRODUCT INFORMATION

Cilnidipine-d_7

Item No. 33796

Formal Name:	1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-(2-methoxyethyl-d_7) 5-[(2E)-3-phenyl-2-propen-1-yl] ester
MF:	$C_{27}H_{21}D_7N_2O_7$
FW:	499.6
Chemical Purity:	≥98% (Cilnidipine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤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

Cilnidipine-d_7 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-d_7 is supplied as a solid. A stock solution may be made by dissolving the cilnidipine-d_7 in the solvent of choice, which should be purged with an inert gas. Cilnidipine-d_7 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 Ca^{2+} channel blocker cilnidipine in the rat focal brain ischemia model. *Biol. Pharm. Bull.* **27(9)**, 1388-1391 (2004).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM