

Product Data Sheet

Product Name: Cilnidipine-d7

Cat. No.: GC48474

Chemical Properties

Cas. No.

SMILES O=C(C1=C(C)NC(C)=C(C(OC([2H])([2H])C([2H])([2H])OC([2H])([2H])[2H])=O)C1C2=CC([N+])([O-])=O)=CC=C2)OC/C=C/C3=CC=CC=C3

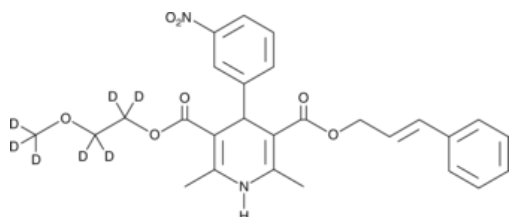
Formula C₂₇H₂₁D₇N₂O₇ M.Wt 499.6

Solubility DMSO: soluble, Methanol: soluble Storage -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Cilnidipine-d7 is intended for use as an internal standard for the quantification of cilnidipine by GC- or LC-MS. 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.

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,

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

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)

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA