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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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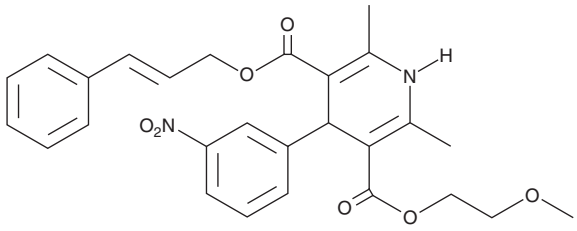
PRODUCT INFORMATION

Cilnidipine

Item No. 26080

CAS Registry No.: 132203-70-4
Formal Name: 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-(2-methoxyethyl) 5-[(2E)-3-phenyl-2-propen-1-yl] ester
Synonym: FRC 8653
MF: $C_{27}H_{28}N_2O_7$
FW: 492.5
Purity: ≥98%
UV/Vis.: λ_{max}: 241, 358 nm
Supplied as: A crystalline 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the cilnidipine in the solvent of choice. Cilnidipine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of cilnidipine in these solvents is approximately 2, 25, and 30 mg/ml, respectively.

Cilnidipine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cilnidipine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cilnidipine has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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).

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