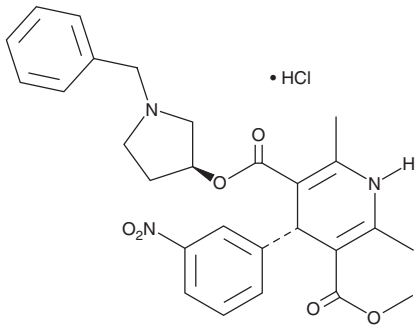
PRODUCT INFORMATION

Barnidipine (hydrochloride)

Item No. 20448

CAS Registry No.: 104757-53-1
Formal Name: (4S)-1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-methyl 5-[(3S)-1-(phenylmethyl)-3-pyrrolidinyl] ester, monohydrochloride
Synonym: YM-09730-5
MF: $C_{27}H_{29}N_3O_6 \bullet HCl$
FW: 528.0
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 237, 356 nm
Supplied as: A crystalline 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

Barnidipine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the barnidipine (hydrochloride) in the solvent of choice. Barnidipine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of barnidipine (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Barnidipine is a dihydropyridine calcium channel blocker that has an IC_{50} value of 0.35 nM in potassium-induced tonic contraction of pig coronary artery.[1] It demonstrates antihypertensive activity by reducing peripheral vascular resistance. It decreases blood pressure in spontaneously hypertensive rats when administered orally at 1 and 3 mg/kg per day.[2] Formulations containing barnidipine have been used as a treatment for hypertension.

References

1. Nakayama, K., Kashiwabara, T., Yamada, S., *et al.* Assessment in pig coronary artery of long-lasting and potent calcium antagonistic actions of the novel dihydropyridine derivative mepirodipine hydrochloride. *Arzneimittelforschung* **39(1)**, 50-55 (1989).
2. Kawashima, K., Toda, H., Oohata, H., *et al.* Antihypertensive and diuretic effects of YM-09730-5, a new calcium antagonist, in stroke-prone spontaneously hypertensive rats. *Gen. Pharmacol.* **22(2)**, 263-266 (1991).

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