

# PRODUCT INFORMATION



## Barnidipine-d<sub>5</sub> (hydrochloride)

Item No. 33609

**Formal Name:** (4S)-1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid, 3-methyl 5-[(3S)-1-((phenyl-d<sub>5</sub>)methyl)-3-pyrrolidinyl] ester, monohydrochloride

**MF:** C<sub>27</sub>H<sub>24</sub>D<sub>5</sub>N<sub>3</sub>O<sub>6</sub> • HCl

**FW:** 533.0

**Chemical Purity:** ≥98% (Barnidipine)

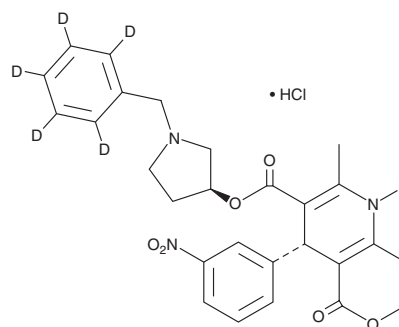
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A 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-d<sub>5</sub> (hydrochloride) is intended for use as an internal standard for the quantification of barnidipine (Item No. 20448) 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).

Barnidipine-d<sub>5</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the barnidipine-d<sub>5</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Barnidipine-d<sub>5</sub> (hydrochloride) is soluble in methanol and DMSO.

### Description

Barnidipine is a dihydropyridine calcium channel blocker that has an IC<sub>50</sub> value of 0.35 nM in potassium-induced tonic contraction of pig coronary artery.<sup>1</sup> 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.<sup>2</sup> Formulations containing barnidipine have been used in the treatment of 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).

#### 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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