

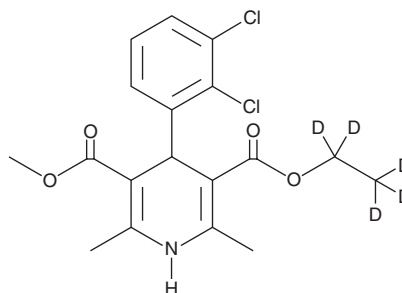
PRODUCT INFORMATION



(±)-Felodipine-d₅

Item No. 30123

CAS Registry No.: 1242281-38-4
Formal Name: 4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylic acid, 3-(ethyl-d₅) 5-methyl ester
MF: C₁₈H₁₄Cl₂D₅NO₄
FW: 389.3
Chemical Purity: ≥98% (Felodipine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
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

(±)-Felodipine-d₅ is intended for use as an internal standard for the quantification of felodipine (Item No. 17535) 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).

(±)-Felodipine-d₅ is supplied as a solid. A stock solution may be made by dissolving the (±)-felodipine-d₅ in the solvent of choice, which should be purged with an inert gas. (±)-Felodipine-d₅ is soluble in the organic solvent chloroform.

Description

Felodipine is an inhibitor of L-type calcium channels.¹ It induces relaxation of precontracted isolated porcine coronary artery segments (EC₅₀ = 0.15 nM), which highly express L-type calcium channels.² Felodipine is selective for L-type calcium channels over N-, R-, and P/Q-type channels at 10 μM, as well as the T-type Ca_v3.2 channel (IC₅₀ = 6.8 μM).^{1,3} Felodipine preferentially inhibits L-type calcium channels in isolated rat portal vein over rat left ventricle (IC₅₀s = 33.9 and 3,981 nM, respectively).⁴ It decreases mean arterial blood pressure and total peripheral resistance in a rabbit model of hypertension induced by renal artery ligation when administered intravenously at doses of 30 and 100 nmol/kg.⁵

References

1. Furukawa, T., Yamakawa, T., Midera, T., et al. Selectivities of dihydropyridine derivatives in blocking Ca²⁺ channel subtypes expressed in *Xenopus* oocytes. *J. Pharmacol. Exp. Ther.* **291**(2), 464-473 (1999).
2. Johnson, J.D. and Fugman, D.A. Calcium and calmodulin antagonists binding to calmodulin and relaxation of coronary segments. *J. Pharmacol. Exp. Ther.* **226**(2), 330-334 (1983).
3. Perez-Reyes, E., Van Deusen, A.L., and Vitko, I. Molecular pharmacology of human Ca_v3.2 T-type Ca²⁺ channels: Block by antihypertensives, antiarrhythmics, and their analogs. *J. Pharmacol. Exp. Ther.* **328**(2), 621-627 (2009).
4. Ljung, B. Vascular selectivity of felodipine: Experimental pharmacology. *J. Cardiovasc. Pharmacol.* **15**(Suppl 4), S11-S16 (1990).
5. Bolt, G.R. and Saxena, P.R. Acute systemic and regional hemodynamic effects of felodipine, a new calcium antagonist, in conscious renal hypertensive rabbits. *J. Cardiovasc. Pharmacol.* **6**(4), 707-712 (1984).

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.

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