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- Expressversand

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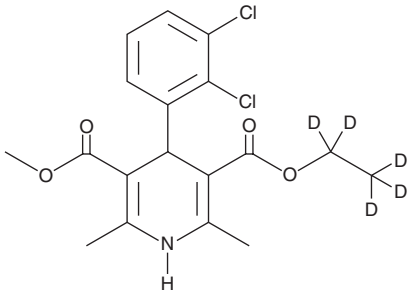
PRODUCT INFORMATION

(±)-Felodipine-d_5

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-d_5) 5-methyl ester
MF:	$C_{18}H_{14}Cl_2D_5NO_4$
FW:	389.3
Chemical Purity:	≥98% ((±)-Felodipine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_5); ≤1% d_0
Supplied as:	A 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

(±)-Felodipine-d_5 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-d_5 is supplied as a solid. A stock solution may be made by dissolving the (±)-felodipine-d_5 in the solvent of choice, which should be purged with an inert gas. (±)-Felodipine-d_5 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 (EC_{50} = 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 (IC_{50} = 6.8 µM).[1,3] (±)-Felodipine preferentially inhibits L-type calcium channels in isolated rat portal vein over rat left ventricle (IC_{50}s = 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

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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 Ca^{2+} 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).

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