

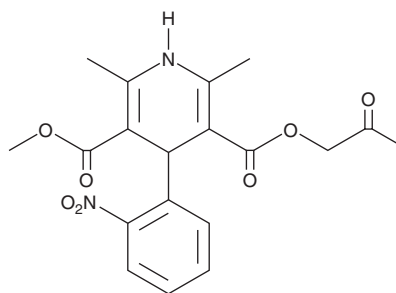
PRODUCT INFORMATION



Aranidipine

Item No. 40813

CAS Registry No.: 86780-90-7
Formal Name: 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-ylidenedicarboxylic acid, 3-methyl 5-(2-oxopropyl) ester
Synonym: MPC-1304
MF: C₁₉H₂₀N₂O₇
FW: 388.4
Purity: ≥98%
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

Aranidipine is supplied as a solid. A stock solution may be made by dissolving the aranidipine in the solvent of choice, which should be purged with an inert gas. Aranidipine is sparingly soluble (1-10 mg/ml) in DMSO.

Description

Aranidipine is an antagonist of voltage-gated calcium channel Ca_v3.2.¹ It inhibits inward currents in *Xenopus* oocytes expressing human Ca_v3.2 channels when used at a concentration of 10 μM. Aranidipine (10 mg/kg) decreases mean blood pressure and increases heart rate in spontaneously hypertensive rats (SHRs).² It increases aortic and coronary blood flow and decreases blood pressure, but not heart rate, in normotensive dogs when administered at a dose of 0.3 mg/kg. Aranidipine (10 μg/kg) decreases blood pressure, as well as increases coronary blood flow velocity and heart contractile force, in dogs.³ It inhibits diet-induced increases in serum levels of total cholesterol, phospholipids, and triglycerides, as well as reduces aortic plaque area, in rabbits fed a high-cholesterol diet when administered at doses of 3 or 10 mg/kg. Formulations containing aranidipine have been used in the treatment of hypertension.

References

1. Furukawa, T., Nukada, T., Namiki, Y., *et al.* Five different profiles of dihydropyridines in blocking T-type Ca²⁺ channel subtypes (Ca_v3.1 (α_{1G}), Ca_v3.2 (α_{1H}), and Cav3.3 (α_{1I})) expressed in *Xenopus* oocytes. *Eur. J. Pharmacol.* **613**(1-3), 100-107 (2009).
2. Kanda, A., Haruno, A., Miyake, H., *et al.* Antihypertensive effects of MPC-1304, a novel calcium antagonist, in experimental hypertensive rats and dogs. *J. Cardiovasc. Pharmacol.* **20**(5), 723-730 (1992).
3. Kanda, A., Haruno, A., Miyoshi, K., *et al.* Cardiovascular profile of MPC-1304, a novel dihydropyridine calcium antagonist: Comparison with other calcium antagonists. *J. Cardiovasc. Pharmacol.* **22**(1), 167-175 (1993).

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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