

# Produktinformation



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## SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



# PRODUCT INFORMATION



## Lacidipine

Item No. 28270

CAS Registry No.: 103890-78-4

Formal Name: 4-[2-[(1E)-3-(1,1-dimethylethoxy)-3-oxo-1-

> propen-1-yl]phenyl]-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylic acid, 3,5-diethyl ester

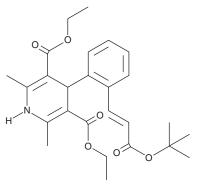
Synonyms: GX 1048, GR 43659X

MF:  $C_{26}H_{33}NO_{6}$ 455.5 FW: **Purity:** 

λ<sub>max</sub>: 240, 284, 368 nm UV/Vis.:

Supplied as: A solid -20°C Storage: Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



#### **Laboratory Procedures**

Lacidipine is supplied as a solid. A stock solution may be made by dissolving the lacidipine in the solvent of choice, which should be purged with an inert gas. Lacidipine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of lacidipine in these solvents is approximately 5, 20, and 25 mg/ml, respectively.

Lacidipine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lacidipine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Lacidipine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

Lacidipine is a dihydropyridine L-type calcium channel blocker.<sup>1</sup> It induces relaxation of isolated rat aorta and inhibits calcium-induced contraction of rabbit ear artery (pA2 = 9.4). It also induces relaxation of calcium-induced contractions in isolated rat colon and bladder and guinea pig trachea (IC<sub>50</sub>s = 6.7, 6, and 7.8 nM, respectively). Lacidipine induces negative inotropy in isolated guinea pig ventricular strips (IC<sub>50</sub> = 110 nM). It reduces mean blood pressure in spontaneously hypertensive rats  $(ED_{25} = 0.35 \text{ mg/kg})$  and in renal hypertensive dogs  $(ED_{25} = 0.22 \text{ mg/kg})$  with a transient increase in heart rate. Lacidipine inhibits copper-induced oxidation of isolated human LDL when used at concentrations of 1 and 5 μM.<sup>2</sup> It reduces the extension of aortic atheromatous lesions and decreases renal injury in ApoE<sup>-/-</sup> mice in a model of Western diet-induced atherosclerosis.3

## References

- 1. Micheli, D., Collodel, A., Semeraro, C., et al. Lacidipine: A calcium antagonist with potent and long-lasting antihypertensive effects in animal studies. J. Cardiovasc. Pharmacol. 15(4), 666-675 (1990).
- Lupo, E., Locher, R., Weisser, B., et al. In vitro antioxidant activity of calcium antagonists against LDL oxidation compared with α-tocopherol. Biochem. Biophys. Res. Commun. 203(3), 1803-1808 (1994).
- Kyselovic, J., Martinka, P., Batova, Z., et al. Calcium channel blocker inhibits Western-type diet-evoked atherosclerosis development in ApoE-deficient mice. J. Pharmacol. Exp. Ther. 315(1), 320-328 (2005).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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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### **CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.**CAYMANCHEM**.COM