

Product Data Sheet

Product Name: Dehydronitrosonisoldipine

Cat. No.: GC33486

Chemical Properties

Cas. No. 87375-91-5

SMILES O=C(C1=C(C2=CC=CC=C2N=O)C(C(OCC(C)C)=O)=C(C)N=C1C)OC

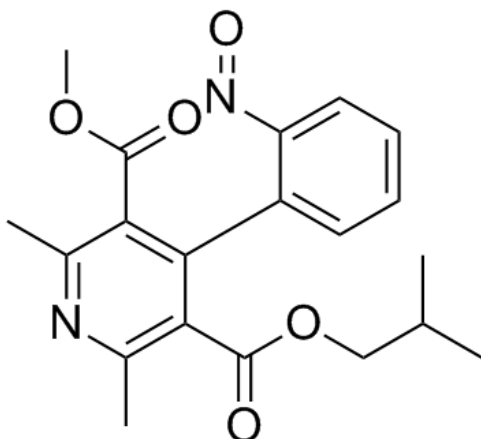
Formula $C_{20}H_{22}N_2O_5$ M.Wt 370.4

Solubility DMSO : 100 mg/mL (269.98 mM) Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Dehydronitrosonisoldipine is a derivative of nisoldipine, which retains calcium channel antagonist activity while also possessing the ability to inhibit sterile alpha and TIR motif-containing protein 1 (SARM1), thus making it a dual-bioactive compound^[1]. Dehydronitrosonisoldipine irreversibly inhibits SARM1 activation by covalently modifying cysteine 311 of the SARM1 protein, thereby blocking downstream axonal degeneration (AxD) signaling pathways^[2]. Dehydronitrosonisoldipine can be used to study the mechanisms of axonal degeneration associated with neurodegenerative diseases,

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such as exploring its role in chemotherapy-induced neuropathy (e.g., vincristine-induced neuropathy)^[2].

References:

[1] Li W H, Huang K, Cai Y, et al. Permeant fluorescent probes visualize the activation of SARM1 and uncover an anti-neurodegenerative drug candidate[J]. Elife, 2021, 10: e67381.

[2] Feldman H C, Merlini E, Guijas C, et al. Selective inhibitors of SARM1 targeting an allosteric cysteine in the autoregulatory ARM domain[J]. Proceedings of the National Academy of Sciences, 2022, 119(35): e2208457119.

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