Dehydronitrosonisoldipine

Cat. No.: HY-Z0816

CAS No.: 87375-91-5

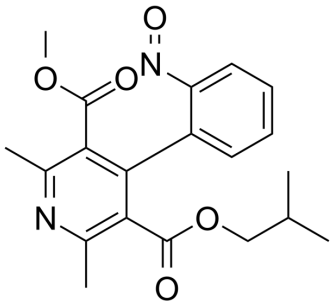
Molecular Formula: $C_{20}H_{22}N_2O_5$

Molecular Weight: 370.4

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (269.98 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6998 mL	13.4989 mL	26.9978 mL
	5 mM	0.5400 mL	2.6998 mL	5.3996 mL
	10 mM	0.2700 mL	1.3499 mL	2.6998 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3 mg/mL (8.10 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (8.10 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (8.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dehydronitrosonisoldipine, a derivative of Nisoldipine (HY-17402), is an irreversible and cell-permeant sterile alpha and TIR motif-containing 1 (SARM1) inhibitor. Dehydronitrosonisoldipine acts mainly by blocking SARM1 activation but not its enzymatic activities. Dehydronitrosonisoldipine inhibits SARM1 and axon degenration (AxD) by covalently modifying cysteines, also inhibits the Vincristine-activated cADPR production in neurons. Dehydronitrosonisoldipine can be used for researching neurodegenerative disorders[1].

IC_{50} & Target

SARM1, Calcium Channel[1][2]

In Vitro

Dehydronitrosonisoldipine exhibits an IC_{50} of 4 μM in the SARM1-dN-expression cells, and decreases the cellular cADPR in

cells expressing SARM1, but not in expressing SAM-TIR cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Proc Natl Acad Sci U S A. 2022 Aug 30;119(35):e2208457119.
- Eur J Immunol. 2021 Jan 17.

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REFERENCES

[1]. Li WH, et al. Permeant fluorescent probes visualize the activation of SARM1 and uncover an anti-neurodegenerative drug candidate. Elife. 2021 May 4;10:e67381.

[2]. Baranda AB, et al. Instability of calcium channel antagonists during sample preparation for LC-MS-MS analysis of serum samples. Forensic Sci Int. 2006 Jan 6;156(1):23-34.

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