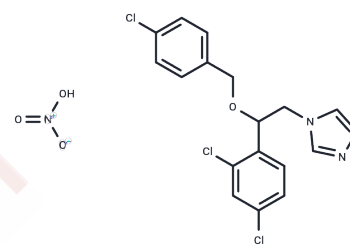


Econazole nitrate

Chemical Properties

CAS No. : 24169-02-6
 Formula: C₁₈H₁₅Cl₃N₂O·HNO₃
 Molecular Weight: 444.7
 Appearance: no data available
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Econazole nitrate (NSC-243115) (Spectazole) is an imidazole class antifungal medicine.
Targets(IC50)	Antibacterial,Antibiotic,Antifection,Antifungal
In vitro	Econazole nitrate is an effective inducer of micronuclei over a narrow dose range in cell lines V79, XEM2 and XEMd-MZ (expresses CYP1A2). [1] Econazole nitrate inhibits the proliferation of MCF-7 cells in a time- and dose-dependent manner by MTT method and colony forming assay. Econazole nitrate results in typical characteristics of apoptosis including the morphological changes and DNA fragmentation in MCF-7 cells. Econazole nitrate results in the decrease expression of procaspase-3, procaspase-9 and bcl-2. [2] Econazole inhibits ADP-ribose-activated currents in HEK-293 cells expressing recombinant human TRPM2 (hTRPM2). Econazole produces an essentially complete inhibition of the TRPM2-mediated current. [3] Econazole (25-50 mM) partially inhibits capacitative Ca ²⁺ entry induced by cyclopiazonic acid, another endoplasmic reticulum Ca ²⁺ pump inhibitor. Econazole induces Ca ²⁺ influx via two separate pathways: one is sensitive to La ³⁺ , the other is not. [4] Econazole reversibly inhibits (Bu)(2)cAMP-stimulated progesterone production in a dose- and time-dependent manner in MA-10 cells without affecting total protein synthesis or P450(scc) and 3beta-hydroxysteroid dehydrogenase (3beta-HSD) enzyme expression or activity. [5] Econazole is a store-operated Ca ²⁺ channel antagonist which induces cytotoxic cell death of leukemia. Econazole (5-20 mM) arrests human colon cancer cells at the G0/G1 phase of the cell cycle. Econazole induces COLO 205 cells apoptosis evidenced by ladder formation in DNA fragmentation assay and sub-G1 peak. [6]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 50 mg/mL (112.44 mM),Sonication is recommended. Ethanol: 5 mg/mL (11.24 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2487 mL	11.2435 mL	22.4871 mL
5 mM	0.4497 mL	2.2487 mL	4.4974 mL
10 mM	0.2249 mL	1.1244 mL	2.2487 mL
50 mM	0.045 mL	0.2249 mL	0.4497 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

- Ferrer-Villada T, et al. Eur J Pharmacol,2006, 531(1-3), 1-8.
Sun J, et al. Iran J Pharm Res,2014, 13(4), 1327-1334.
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Jan CR, et al. Biochim Biophys Acta,1999, 1448(3), 533-542.
Walsh LP, et al. J Steroid Biochem Mol Biol,2000, 75(4-5), 229-236.

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