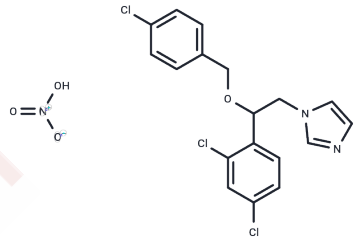
# Data Sheet (Cat.No.T0444L)

TargetMol

## Econazole nitrate

### Chemical Properties



CAS No. : 24169-02-6

Formula: C18H15Cl3N2O·HNO3

Molecular Weight: 444.70

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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| 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 Ca2+ entry induced by cyclopiazonic acid, another endoplasmic reticulum Ca2+ pump inhibitor. Econazole induces Ca2+ influx via two separate pathways: one is sensitive to La3+, 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 Ca2+ 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

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| Solubility | H2O: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: 50 mg/mL (112.44 mM),Sonication is recommended.<br>Ethanol: 5 mg/mL (11.24 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.5 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.* |

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| In vivo Formulation | *Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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.
Hill K, et al. Naunyn Schmiedebergs Arch Pharmacol,2004, 370(4), 227-237.
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.