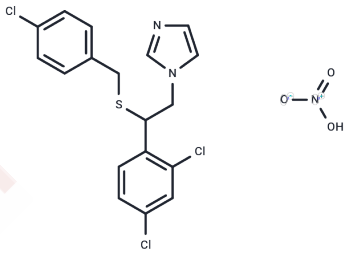
Data Sheet (Cat.No.T6686)

TargetMol

Sulconazole mononitrate

Chemical Properties



CAS No. : 61318-91-0

Formula: C18H15Cl3N2S·HNO3

Molecular Weight: 460.76

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

Description	Sulconazole mononitrate (Exelderm) is the nitrate salt form of sulconazole, a synthetic imidazole derivative with the antifungal property. Sulconazole mononitrate inhibits fungal cytochrome P-450 sterol C-14 alpha-demethylation, resulting in the accumulation of fungal 14 alpha-methyl sterols and inhibition of the synthesis of ergosterol, an important component of the fungal cell membrane. Inhibition of ergosterol synthesis leads to a disruption of cell membrane permeability, and ultimately inhibition of cell wall synthesis. In addition, Sulconazole mononitrate seems to interfere with the autolytic degradation of fungal DNA and RNA.
Targets(IC50)	Antibacterial,Antibiotic,Antifungal
In vitro	Sulconazole mononitrate possesses a broad spectrum of activity in vitro against dermatophytes, yeasts and some Gram-positive bacteria at concentrations below 5 mg/L in vitro. It has been shown that against representatives of pathogenic yeasts, dermatophytes and Aspergilli, the RIF values of sulconazole are broadly similar to those of other imidazoles. The fungicidal potency of sulconazole in vitro depends on its concentration and on the growth phase of the inoculum cells. Sulconazole has also demonstrated antibacterial activity in vitro, with MIC values below 12.5 mg/L. [1]
In vivo	The efficacy and safety of sulconazole 1% cream has been demonstrated in controlled clinical studies in patients with superficial dermatophyte or yeast infections. To minimise the risk of reinfection treatment should continue for 3 weeks in Candida infections, tinea cruris, tinea corporis and pityriasis versicolor, and for 4 weeks in patients with tinea pedis. [1]

Solubility Information

Solubility	DMSO: 55 mg/mL (119.37 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), (< 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 (4.34 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1703 mL	10.8516 mL	21.7033 mL
5 mM	0.4341 mL	2.1703 mL	4.3407 mL
10 mM	0.217 mL	1.0852 mL	2.1703 mL
50 mM	0.0434 mL	0.217 mL	0.4341 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

Benfield P, et al. Drugs, 1988, 35(2), 143-153.