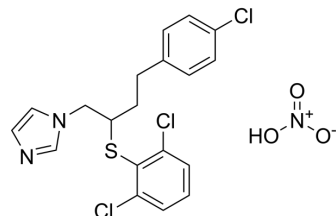


Butoconazole nitrate

Cat. No.:	HY-B0293
CAS No.:	64872-77-1
Molecular Formula:	C ₁₉ H ₁₈ Cl ₃ N ₃ O ₃ S
Molecular Weight:	474.79
Target:	Fungal
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (210.62 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.1062 mL	10.5310 mL	21.0619 mL
	5 mM	0.4212 mL	2.1062 mL	4.2124 mL
	10 mM	0.2106 mL	1.0531 mL	2.1062 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.27 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Butoconazole nitrate (RS 35887), an imidazole antifungal agent, is active against *Candida* spp. and effective against vaginal infections due to *Candida albicans*. Butoconazole nitrate is presumed to function as other imidazole derivatives via inhibition of steroid synthesis^{[1][2]}.

In Vitro

Imidazoles generally inhibit the conversion of lanosterol to ergosterol, resulting in a change in fungal cell membrane lipid composition. This structural change alters cell permeability and, ultimately, results in the osmotic disruption or growth inhibition of the fungal cell^[1].

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

REFERENCES

- [1]. Anik ST, et al. Extreme vertexes design in formulation development: solubility of butoconazole nitrate in a multicomponent system. J Pharm Sci. 1981;70(8):897-900.
- [2]. Pharmacology refers to the chemical makeup and behavior of GYNAZOLE 1 (butoconazole nitrate cream).
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Caution: Product has not been fully validated for medical applications. For research use only.

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