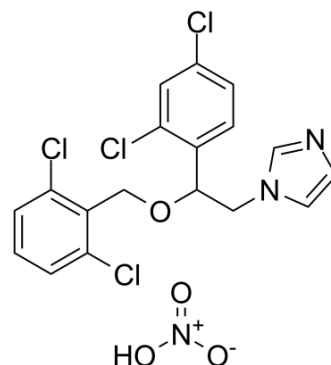


Isoconazole nitrate

Cat. No.:	HY-B1444		
CAS No.:	24168-96-5		
Molecular Formula:	C ₁₈ H ₁₅ Cl ₄ N ₃ O ₄		
Molecular Weight:	479.14		
Target:	Bacterial; Fungal; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (208.71 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		2.0871 mL	10.4354 mL	20.8707 mL
		5 mM		0.4174 mL	2.0871 mL	4.1741 mL
10 mM			0.2087 mL	1.0435 mL	2.0871 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Isoconazole nitrate is a broad-spectrum antimicrobial agent with a highly effective antimycotic and gram-positive antibacterial activity, exhibiting a rapid rate of absorption and low systemic exposure potential ^[1] .
In Vitro	Isoconazole nitrate also exerts several other effects on the fungal membrane, which are independent of inhibition of the ergosterol synthesis. Isoconazole nitrate (ISN) causes a rapid reduction of cellular adenosine triphosphate (ATP) within 10 min of in vitro exposure ^[1] . Isoconazole nitrate (1, 10 µg/mL) induces a blockade of cell division in vitro by its action on synthesis and organisation of the

cell membrane. Isoconazole nitrate (50, 100 µg/mL), ISN induced necrosis and death of fungal cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Veraldi S, et al. Isoconazole nitrate: a unique broad-spectrum antimicrobial azole effective in the treatment of dermatomycoses, both as monotherapy and in combination with corticosteroids. *Mycoses*. 2013 May;56 Suppl 1:3-15.
- [2]. Gugnani HC, et al. Isoconazole nitrate in the treatment of tropical dermatomycoses. *Mycoses*. 1994 Jan-Feb;37(1-2):39-41.
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Caution: Product has not been fully validated for medical applications. For research use only.

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