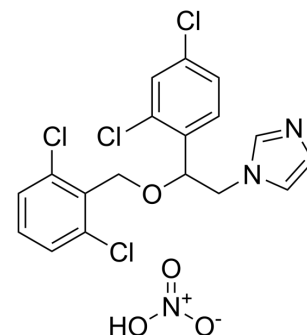


## Isoconazole nitrate

<b>Cat. No.:</b>	HY-B1444
<b>CAS No.:</b>	24168-96-5
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>15</sub> Cl <sub>4</sub> N <sub>3</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	479.14
<b>Target:</b>	Bacterial; Fungal; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (208.71 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		2.0871 mL	10.4354 mL	20.8707 mL
		<b>5 mM</b>		0.4174 mL	2.0871 mL	4.1741 mL
	<b>10 mM</b>		0.2087 mL	1.0435 mL	2.0871 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. 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					
	2. 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					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	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 <sup>[1]</sup> .
<b>In Vitro</b>	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 <sup>[1]</sup> . 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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## 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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