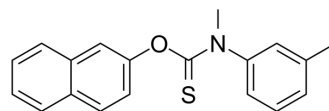


## Tolnaftate

Cat. No.:	HY-B0370		
CAS No.:	2398-96-1		
Molecular Formula:	C <sub>19</sub> H <sub>17</sub> NOS		
Molecular Weight:	307.41		
Target:	Fungal		
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 : 50 mg/mL (162.65 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.2530 mL	16.2649 mL	32.5298 mL
	5 mM	0.6506 mL	3.2530 mL	6.5060 mL
	10 mM	0.3253 mL	1.6265 mL	3.2530 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: ≥ 3.25 mg/mL (10.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 3.25 mg/mL (10.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 3.25 mg/mL (10.57 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Tolnaftate (NP-27) is a synthetic thiocarbamate used as an anti-fungal agent. .

#### IC<sub>50</sub> & Target

Antifungal<sup>[1]</sup>.

#### In Vitro

Tolnaftate (NP-27) blocked sterol biosynthesis in fungal cells and cell extracts, with accumulation of squalene. This point of action was confirmed by the direct inhibition of microsomal squalene epoxidase from *Candida albicans*<sup>[1]</sup>. Tolnaftate (NP-

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27) inhibited sterol biosynthesis, At 100 microM, tolinaftate caused up to a 30% release of intracellular [14C]aminoisobutyric acid<sup>[2]</sup>.

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

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## REFERENCES

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[1]. Ryder, N.S., I. Frank, and M.C. Dupont, Ergosterol biosynthesis inhibition by the thiocarbamate antifungal agents tolinaftate and tolcliate. *Antimicrob Agents Chemother*, 1986. 29(5): p. 858-60.

[2]. Georgopapadaku, N.H. and A. Bertasso, Effects of squalene epoxidase inhibitors on *Candida albicans*. *Antimicrob Agents Chemother*, 1992. 36(8): p. 1779-81.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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