Miconazole

Cat. No.: HY-B0454

CAS No.: 22916-47-8

Molecular Formula: $C_{18}H_{14}Cl_4N_2O$

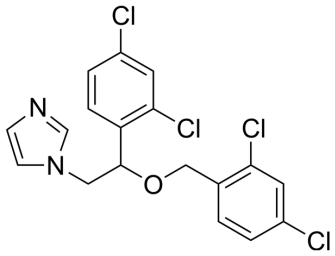
Molecular Weight: 416.13

Target: Fungal; Bacterial; 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 (240.31 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4031 mL	12.0155 mL	24.0310 mL
	5 mM	0.4806 mL	2.4031 mL	4.8062 mL
	10 mM	0.2403 mL	1.2015 mL	2.4031 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.01 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (5.00 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Miconazole (R18134) is an imidazole antifungal agent. Miconazole also has antibacterial effects[2].

In Vitro

Miconazole is an imidazole antifungal agent, developed by Janssen Pharmaceutica, commonly applied topically to the skin or to mucous membranes to cure fungal infections. It works by inhibiting the synthesis of ergosterol, a critical component of fungal cell membranes. It can also be used against certain species of Leishmania protozoa which are a type of unicellular parasite that also contain ergosterol in their cell membranes. In addition to its antifungal and antiparasitic actions, it also has some antibacterial properties. Miconazole is also used in Ektachrome film developing in the final rinse of the Kodak E-6 process and similar Fuji CR-56 process, replacing formaldehyde. Fuji Hunt also includes miconazole as a final rinse additive

	in their formulation of the C-41RA rapid access color negative developing process. From Wikipedia. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Acta Physiol. 2023 Jan 6;e13926.
- J Biol Chem. 2022 May;298(5):101847.

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REFERENCES

[1]. http://en.wikipedia.org/wiki/Miconazole

[2]. Nenoff P, et al. New insights on the antibacterial efficacy of miconazole in vitro. Mycoses. 2017 Aug;60(8):552-557.

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