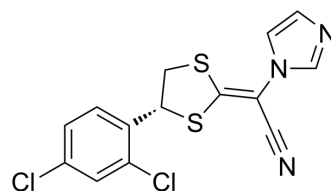


Luliconazole

Cat. No.:	HY-14283		
CAS No.:	187164-19-8		
Molecular Formula:	C ₁₄ H ₉ Cl ₂ N ₃ S ₂		
Molecular Weight:	354.28		
Target:	Fungal; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (141.13 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.8226 mL	14.1131 mL	28.2263 mL
	5 mM	0.5645 mL	2.8226 mL	5.6453 mL
	10 mM	0.2823 mL	1.4113 mL	2.8226 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 (7.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Luliconazole (NND 502) is a topical antifungal imidazole antibiotic with broad-spectrum and potent antifungal activity. Luliconazole can be used for the research of skin infection, including dermatophytosis, tinea corporis, tinea pedis et al^[1].

In Vitro

The MICs of LLCZ against the organism measured by a standardized microdilution method using RPMI 1640 medium, were 0.002 µg/ml for *T. mentagrophytes* TIMM1189 and 0.002 µg/ml for TIMM2789^[1].
The minimum inhibitory concentrations (MIC) of luliconazole against *Trichophyton* spp. (*T. rubrum*, *T. mentagrophytes* and *T. tonsurans*) and *Candida albicans* are measured by the standardized broth microdilution method^[1].

Luliconazole demonstrates great potency against Trichophyton spp. (MIC range: 0.00012-0.002 µg/ml) than the reference agents, with T. rubrum being the most susceptible to it (MIC range: 0.00012-0.00024 µg/ml). Luliconazole is against T. mentagrophytes with MIC values ranging 0.00012-0.002 µg/ml. Luliconazole is also highly active against Candida albicans (MIC range: 0.031-0.13 µg/ml). Further, the MIC of luliconazole against Malassezia restricta is very low (MIC range: 0.004-0.016 µg/ml)^[1].

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

In Vivo

Luliconazole (subcutaneous injection; 1, 5 and 25 mg/kg/day) is administered from the beginning of organogenesis (gestation day 7) through the end of lactation (lactation day 20). Luliconazole at 25 mg/kg presents maternal toxicity and embryofetal toxicity (increased prenatal pup mortality, reduced live litter sizes and increased postnatal pup mortality). Luliconazole at 5 mg/kg exhibits no embryofetal toxicity. Additionally, at 25 mg/kg/day has no treatment effects on postnatal development in rats^[2].

Luliconazole (appliance on skin; 0.02%-1%; 7-14 days) has dose-dependent therapeutic efficacy on skin, it exerts efficacy its even at a concentration of 0.02%, and its efficacy at 0.1% is equal to that of 1% bifonazole crema tinea corporis model (4- and 8-day treatment) and the tinea pedis model (7- and 14-day treatment)^[3].

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

Animal Model:	Male specific-pathogen-free (SPF) Hartley guinea pig models of tinea corporis and tinea pedis ^[2]
Dosage:	0.02%-1%
Administration:	Appliance on skin; 0.02%-1%; 7-14 days
Result:	Was sufficiently potent for short-term treatment for dermatophytosis in vivo.

REFERENCES

[1]. Hiroyasu Koga, et al. Short-term therapy with luliconazole, a novel topical antifungal imidazole, in guinea pig models of tinea corporis and tinea pedis. Antimicrob Agents Chemother. 2012 Jun;56(6):3138-43.

[2]. Hiroyasu Koga, et al. In vitro antifungal activities of luliconazole, a new topical imidazole. Med Mycol. 2009;47(6):640-7.

[3]. LUZU (luliconazole) Cream, 1% for topical use

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

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