

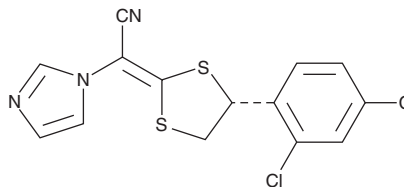
PRODUCT INFORMATION



Luliconazole

Item No. 23120

CAS Registry No.: 187164-19-8
Formal Name: αE-[(4R)-4-(2,4-dichlorophenyl)-1,3-dithiolan-2-ylidene]-1H-imidazole-1-acetonitrile
Synonym: NND-502
MF: C₁₄H₉Cl₂N₃S₂
FW: 354.3
Purity: ≥98%
UV/Vis.: λ_{max}: 296 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Luliconazole is supplied as a crystalline solid. A stock solution may be made by dissolving the luliconazole in the solvent of choice. Luliconazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of luliconazole in these solvents is approximately 10, 20, and 33 mg/ml, respectively.

Luliconazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, luliconazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Luliconazole has a solubility of approximately 0.16 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Luliconazole is a broad spectrum imidazole that is active against various fungi, including *Tinea*, *Candida*, *Trichophyton*, *Aspergillus*, and *Epidermophyton*.^{1,2} It has MIC values of 2.5-20, 0.63-2.5, 31-250, and ≤0.31-0.63 ng/ml for *T. mentagrophytes*, *T. rubrum*, *C. albicans*, and *A. fumigatus*, respectively, in broth dilution assays. *In vitro*, luliconazole has a geometric mean MIC value of 2.35 ng/ml against *A. terreus*, a fungal species responsible for life-threatening invasive aspergillosis in immunocompromised and high-risk patients.³ It prevents mortality in rats with systemic *A. fumigatus* infections and in mice with systemic *C. albicans* infections.² It is effective in eliminating tinea pedis in a guinea pig model when used topically at a concentration of 1% once per day for seven days.¹ Topical formulations containing luliconazole have been used in the treatment of fungal infections.

References

1. Niwano, Y., Kuzuhara, N., Kodama, J., *et al.* In vitro and in vivo antidermatophyte activities of NND-502, a novel optically active imidazole antimycotic agent. *Antimicrob. Agents and Chemother.* **42(4)**, 967-970 (1998).
2. Niwano, Y., Kuzuhara, N., Goto, Y., *et al.* Efficacy of NND-502, a novel imidazole antimycotic agent, in experimental models of *Candida albicans* and *Aspergillus fumigatus* infections. *Int. J. Antimicrob. Agents* **12(3)**, 221-228 (1999).
3. Zargarani, M., Taghipour, S., Kiasat, N., *et al.* Luliconazole, an alternative antifungal agent against *Aspergillus terreus*. *J. Mycol. Med.* **27(3)**, 351-356 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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