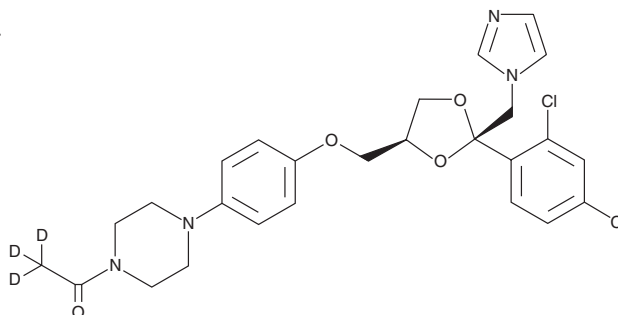


PRODUCT INFORMATION



Ketoconazole-d₃ Item No. 10010656

CAS Registry No.: 1217766-70-5
Formal Name: 1-(4-(4-(((2R,4S)-2-((1H-imidazol-1-yl)methyl)-2-(2,4-dichlorophenyl)-1,3-dioxolan-4-yl)methoxy)phenyl)piperazin-1-yl)ethan-1-one-2,2,2-d₃
MF: C₂₆H₂₅Cl₂D₃N₄O₄
FW: 534.5
Chemical Purity: ≥98% (Ketoconazole)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Supplied as: A 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

Ketoconazole-d₃ is intended for use as an internal standard for the quantification of ketoconazole (Item No. 15212) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Ketoconazole-d₃ is supplied as a solid. A stock solution may be made by dissolving the ketoconazole-d₃ in the solvent of choice, which should be purged with an inert gas. Ketoconazole-d₃ is slightly soluble in chloroform and methanol.

Description

Ketoconazole is a broad-spectrum triazole antifungal agent that has activity against *C. albicans*, *C. krusei*, *C. tropicalis*, *C. glabrata*, *C. parapsilosis*, *C. neoformans*, and *A. fumigatus* strains (IC₅₀s = 0.031-8 µg/ml).¹ It inhibits the fungal cytochrome P450 (CYP) isoform CYP51, also known as lanosterol 14α-demethylase, which arrests ergosterol (Item No. 19850) biosynthesis at the fungal membrane. Ketoconazole also inhibits human CYP3A4 (IC₅₀ = 0.54 µM). Formulations containing ketoconazole have been used in the treatment of fungal infections.

Reference

1. Dilmaghanian, S., Gerber, J.G., Filler, D.G., *et al.* Enantioselectivity of inhibition of cytochrome P450 3A4 (CYP3A4) by ketoconazole: Testosterone and methadone as substrates. *Chirality* **16(2)**, 79-85 (2004).

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.

WARRANTY AND LIMITATION OF REMEDY

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