Product Information

Ketoconazole
Item No. 15212

CAS Registry No.: 65277-42-1
Formal Name: 1-[4-[4-[1(2R,4S)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy]phenyl]-1-piperazinyl]-ethanone
Synonyms: Nizoral, R 41400
MF: C_{26}H_{28}Cl_{2}N_{4}O_{4}
FW: 531.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_{max}: 244, 297 nm

Laboratory Procedures
For long term storage, we suggest that ketoconazole be stored as supplied at -20°C. It should be stable for at least two years.
Ketoconazole is supplied as a crystalline solid. A stock solution may be made by dissolving the ketoconazole in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ketoconazole in these solvents is approximately 1, 2, and 5 mg/ml, respectively.
Ketoconazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ketoconazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ketoconazole has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.
Ketoconazole is an orally active broad spectrum antifungal agent that blocks ergosterol biosynthesis by inhibiting the fungal cytochrome P450 (CYP) isoform CYP51, also known as lanosterol 14α-demethylase. It potently inhibits the mammalian analog CYP51A1 (IC₅₀ = 63.5 nM), as well as a variety of other CYP isoforms.²⁻⁶

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/15212

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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