

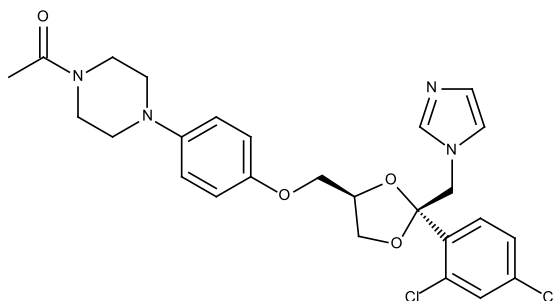


Catalog # 10-1015

Ketoconazole

CAS# 65277-42-1

(±)-1-[4-(4-[-2-(2,4-Dichlorophenyl)-2-(1*H*-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy}phenyl)piperazin-1-yl]ethan-1-one
Lot # X101278



Ketoconazole is a broad spectrum antifungal agent which acts via inhibition of a cytochrome P450, CYP51A1 which is a lanosterol 14 α -demethylase.¹ Also inhibits CYP3A and CYP1A1.² Inhibits adrenal steroidogenesis.³ Downregulates cholesterol synthesis in drug-tolerant human lung cancer cell lines.⁴ Blocks the biosynthesis of leukotrienes (LT) via inhibition of 5-lipoxygenase and dose dependently inhibits LT-mediated bronchoconstriction in guinea pigs.⁵

- 1) Lambert *et al.* (1986) *The effects of ketoconazole on adrenal and testicular steroidogenesis in vitro*; *Biochem. Pharmacol.* **35** 3999
- 2) Sai *et al.* (2000) Assessment of specificity of eight chemical inhibitors using cDNA-expressed cytochromes P450. *Xenobiotica* **30** 327
- 3) Loose *et al.* (1983) *Ketoconazole blocks adrenal steroidogenesis by inhibiting cytochrome P450-dependent enzymes*; *J. Clin. Invest.* **71** 1495
- 4) Howell *et al.* (2019) *Lung cancer cells survive epidermal growth factor receptor tyrosine kinase inhibitor exposure through upregulation of cholesterol synthesis*; *FASEB Bioadv.* **2** 90
- 5) Beetens *et al.* (1986) *Ketoconazole inhibits the biosynthesis of leukotrienes in vitro and in vivo*; *Biochem. Pharmacol.* **35** 883

PHYSICAL DATA

Molecular Weight:	531.43
Molecular Formula:	C ₂₆ H ₂₈ Cl ₂ N ₄ O ₄
Purity:	>98% (TLC)
Solubility:	DMSO (up to 25 mg/ml) or ethanol (up to 20 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at RT for up to two years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

www.focusbiomolecules.com