

Certificate of Analysis

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Product Name: Clotrimazole

CAS Number: 23593-75-1

IUPAC Name: 1-(2-Chloro- α,α -diphenylbenzyl)imidazole

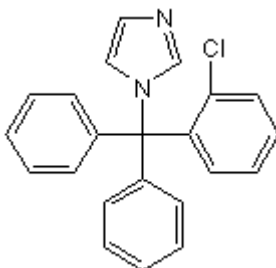
Catalog No.: 4096

Batch No.: 2

EC Number: 245-764-8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₁₇ClN₂
Batch Molecular Weight: 344.84
Physical Appearance: White solid
Solubility: DMSO to 75 mM
ethanol to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	76.63	4.97	8.12
Found	76.44	4.92	8.18

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Imidazole antimycotic and cytochrome P450 inhibitor. Inhibits Ca^{2+} -activated K^+ current ($\text{IC}_{50} = 3 \mu\text{M}$) and L-type Ca^{2+} current; increases the firing rate of action potentials. Exhibits antiproliferative activity in vitro and in vivo. Also an inverse agonist of the human constitutive androstane receptor (hCAR).

Physical and Chemical Properties:

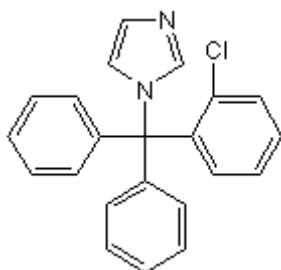
Batch Molecular Formula: $\text{C}_{22}\text{H}_{17}\text{ClN}_2$

Batch Molecular Weight: 344.84

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Lempiainen et al (2005) Antagonist- and inverse agonist-driven interactions of the vitamin D receptor and the constitutive androstane receptor with corepressor protein. *Mol.Endocrinol.* **19** 2258. PMID: 15905360.

Thomas et al (1999) The antifungal antibiotic clotrimazole potently inhibits L-type calcium current in guinea-pig ventricular myocytes. *Br.J.Pharmacol.* **126** 1531. PMID: 10323582.

Wu et al (1999) Inhibition of Ca^{2+} -activated K^+ current by clotrimazole in rat anterior pituitary GH3 cells. *Neuropharmacology* **38** 979. PMID: 10428416.

Snajdrova et al (1998) Clomitrazone, an antimycotic drug, inhibits the sarcoplasmic reticulum calcium pump and contractile function in heart muscle. *J.Biol.Chem.* **273** 28032. PMID: 9774419.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 75 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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