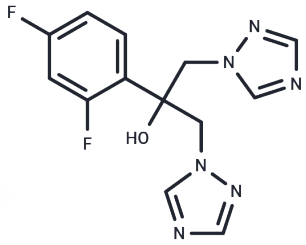
Data Sheet (Cat.No.T1388)

TargetMol

Fluconazole

Chemical Properties



CAS No. : 86386-73-4

Formula: C13H12F2N6O

Molecular Weight: 306.27

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Fluconazole (UK-49858) is a triazole antifungal agent used to treat oropharyngeal candidiasis and cryptococcal meningitis in AIDS.
Targets(IC50)	Antibacterial,Antibiotic,Antifection,Antifungal
In vitro	Fluconazole significantly affects the fungicidal activity of 5-fluorocytosine against cryptococcal meningitis in mice. It is highly effective in extending the survival period of rats infected with representative Candida strains. Compared to the activity of each drug used alone, the combination of fluconazole with 5-fluorocytosine and amphotericin B exhibits markedly improved activity against cryptococcal meningitis.
In vivo	Under physiological pH conditions, Fluconazole's activity against 35 Candida albicans strains is 16-fold lower than that of Ketoconazole. When used in combination with Amphotericin B, Fluconazole exhibits synergistic effects against C. albicans cells, yet it does not alter the anti-biofilm activity of AmB. Fluconazole, alongside Caspofungin, antagonizes biofilm formation but has no effect on planktonic cells. Significantly, Fluconazole reduces ergosterol levels in C. albicans planktonic cells, leading to membrane perturbation. Its activity is less sensitive to acidic conditions compared to Ketoconazole. Additionally, the combined use of Fluconazole and Itraconazole shows effective activity against various Candida species, including Fluconazole-resistant strains of C. albicans and Candida tropicalis.

Solubility Information

Solubility	Ethanol: 30.6 mg/mL (99.91 mM),Sonication is recommended. DMSO: 260 mg/mL (848.92 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.53 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2651 mL	16.3255 mL	32.6509 mL
5 mM	0.653 mL	3.2651 mL	6.5302 mL
10 mM	0.3265 mL	1.6325 mL	3.2651 mL
50 mM	0.0653 mL	0.3265 mL	0.653 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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Diversity and Antifungal Susceptibilities of Yeasts from Mangroves in Hong Kong, China-A One Health Aspect