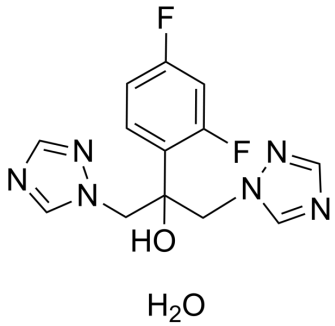
Fluconazole hydrate

Cat. No.:	HY-B0101A
CAS No.:	155347-36-7
Molecular Formula:	$C_{13}H_{14}F_2N_6O_2$
Molecular Weight:	324.29
Target:	Fungal; Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Fluconazole (hydrate) is a triazole antifungal drug used in the treatment and prevention of superficial and systemic fungal infections.Target: AntifungalFluconazole (hydrate) is the hydrate salt form of fluconazole, which is a triazole antifungal intended for oral treatment of superficial and systemic mycoses. In tests done in standard mycological media, the compound had minimal inhibitory concentrations against pathogenic Candida species that were usually in excess of 100 mg/l. Fluconazole inhibited branching and hyphal development in C. albicans at concentrations as low as 10(-6) M (0.3 mg/l), but miconazole and ketoconazole were still active in these tests at concentrations 100 times lower than this [1]. Oral fluconazole was not associated with a significantly increased risk of birth defects overall or of 14 of the 15 specific birth defects of previous concern. Fluconazole exposure may confer an increased risk of tetralogy of Fallot [2]. Fluconazole is predicted to be ineffective against Cryptococcus gattii in the koala as a sole therapeutic agent administered at 10 mg/kg p.o. every 12 h [3].Clinical indications: Balanitis; Candida infection; Cryptococcus infection; Cryptococcus neoformans meningitis; Dermatomycosis; Female genital tract infection; Fungal infection; Fungal respiratory tract infection; Fungal urinary tract infection; Prophylaxis; Tinea capitis; Tinea corporis; Tinea cruris; Tinea pedis .Toxicity: Symptoms of overdose include hallucinations and paranoid behavior.

CUSTOMER VALIDATION

- Sci Adv. 2021 May 7;7(19):eabe5171.
- J Hazard Mater. 2021 Aug 15;416:125764.
- Environ Int. 2019 Jun;127:694-703.
- Transl Res. 2022 Apr 20;S1931-5244(22)00073-1.
- Microb Biotechnol. 2021 May 6.

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REFERENCES

[1]. Odds, F.C., S.L. Cheesman, and A.B. Abbott, Antifungal effects of fluconazole (UK 49858), a new triazole antifungal, in vitro. J Antimicrob Chemother, 1986. 18(4): p. 473-8.

[2]. Molgaard-Nielsen, D., B. Pasternak, and A. Hviid, Use of oral fluconazole during pregnancy and the risk of birth defects. N Engl J Med, 2013. 369(9): p. 830-9.

[3]. Black, L.A., et al., Pharmacokinetics of fluconazole following intravenous and oral administration to koalas (Phascolarctos cinereus). J Vet Pharmacol Ther, 2013.

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