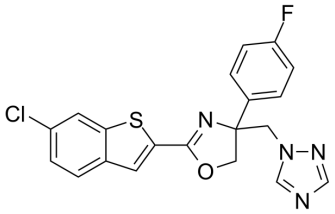
Antifungal agent 25

Cat. No.:	HY-143406
CAS No.:	2566522-50-5
Molecular Formula:	$C_{20}H_{14}ClFN_4OS$
Molecular Weight:	412.87
Target:	Fungal
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antifungal agent 25 is a potent broad-spectrum antifungal agent. Antifungal agent 25 shows antifungal effect against Candida albicans and fluconazole-resistant strain of Candida albicans. Antifungal agent 25 stable metabolic property in vivo [1].

In Vitro

Antifungal agent 25 (compound A31) shows antifungal effect with MIC values of <0.03, <0.03, <0.03, 0.25, 0.5 μg/mL for Candida albicans (SC5314), Candida albicans ((GIM 2.194), Cryptococcus neoformans (GIM 2.209), Candida tropicalis (GIM 2.183), Aspergillus fumigatus (cgmcc 3.7795), respectively[1].

Antifungal agent 25 shows moderate antifungal activity with MIC values of 0.5, >64 μg/mL for strain CaR (fluconazole-resistant strain of Candida albicans) and strain 17# (fluconazole and itraconazole resistant strain of Candida albicans), respectively[1].

Antifungal agent 25 (0.015 mg/mL) blocks the biosynthesis of ergosterol by inhibiting the key enzyme lanosterol 14a-demethylase (CYP51)[1].

Antifungal agent 25 shows less likely to produce drug-drug interactions with IC_{50}s of 4.47, 2.87, 1.04, 31.3, 10.1 μM for α-naphthoflavone (CYP1A2), sulfaphenazole (CYP2C9), ticlopidine (CYP2C19), quinidine (CYP2D6), and ketoconazole (CYP3A4), respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Antifungal agent 25 (2 mg/kg; i.v.) exhibits stable metabolic property in SD rats[1].

Pharmacokinetic Parameters of Antifungal agent 25 in SD rats[1].

dose(mg/kg)	C_0(ng/mL)	$T_{1/2}$(h)	Vd_{ss}(L/kg)	Cl (mL/min/kg)	$AUC_{0\text{-last}}$ (ng·h/mL)	$AUC_{0\text{-inf}}$ (ng·h/mL)
2 mg/kg	482±108	3.34±2.37	10.3±3.12	69.4±18.8	483±137	5.5±136

SD rats; 2 mg/kg; i.v.[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	SD rats[1]
Dosage:	2 mg/kg

Administration:	I.v.
Result:	Exhibited stable metabolic property in SD rats.

REFERENCES

[1]. Zhao L, et al. Design, synthesis, and biological activity evaluation of 2-(benzo[b]thiophen-2-yl)-4-phenyl-4,5-dihydrooxazole derivatives as broad-spectrum antifungal agents. Eur J Med Chem. 2022; 228:113987.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA