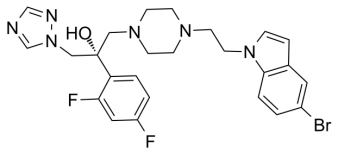
S-F24

Cat. No.:	HY-149844
CAS No.:	2946669-78-7
Molecular Formula:	$C_{25}H_{27}BrF_2N_6O$
Molecular Weight:	545.42
Target:	Fungal
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

S-F24 is an antifungal agent with excellent broad-spectrum. S-F24 inhibits CYP3A4 with an IC_{50} value of 0.4 μM. S-F24 displays a good safety profile with high selectivity, low hemolytic effects, and low tendency to induce resistance. S-F24 can be used for research on fungal infections[1].

In Vitro

S-F24 (10-30 μM, 48 h) has weak cytotoxicity on mammalian cells[1].
S-F24 (0.002 μg/mL, 20 passages) increases the MIC_{80} value against C. albicans SC5314 by 8-fold[1].
S-F24 (0.004 μg/mL, 16 h) inhibits ergosterol biosynthesis to 92.03% in C. albicans SC5314[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	HUVEC, MCF-10A, 16HBE, LO2
Concentration:	0.4 μM, 10-30 μM
Incubation Time:	48 h
Result:	Displayed weak cytotoxicity with IC_{50} values ranging from 13.97 to 29.22 μM. Inhibited CYP3A4 with an IC_{50} value of 0.4 μM.

In Vivo

S-F24 (1, 5 mg/kg, i.p., 5 days, daily) is widely used in treating invasive fungal infection in female IRC mice infected with C. albicans SC5314, A. fumigatus CGMCC3.7795, and multi-resistant C. albicans 24D[1].
S-F24 (0.5, 1 mg/kg, i.p., 5 days, daily) is highly efficacious in treating superficial fungal infection in female IRC mice infected with C. albicans SC5314[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ICR mouse models infected systemically with C. albicans SC5314, or A. fumigatus CGMCC3.7795, or multi-resistant C. albicans 24D[1]
Dosage:	1, 5 mg/kg/day, continue for 5 days
Administration:	Intraperitoneal injection (i.p.)
Result:	Increased the median survival time (MST) to 6 days at 1.0 mg/kg/day in C. albicans SC5314

	challenge. Increased the MST in a dose-dependent manner significantly in fumigatus CGMCC3.7795 challenge. Increased the MST to 12 days at 1.0 mg/kg/day in multi-resistant C. albicans 24D challenge.

Animal Model:	C. albicans[1].
Dosage:	0.5, 1 mg/kg/day, continue for 5 days
Administration:	Intraperitoneal injection (i.p.)
Result:	Reduced the fungal burden significantly and showed better therapeutic effects than the Luli (HY-14283) (1 mg/kg) group. Inhibited fungi almost completely in the group at 1.0 mg/kg.

REFERENCES

[1]. Zhu P, et al. Novel Triazoles with Potent and Broad-Spectrum Antifungal Activity In Vitro and In Vivo. J Med Chem. 2023 Jun 8;66(11):7497-7515.

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