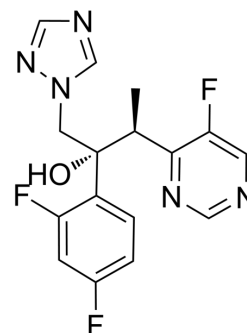


Voriconazole

Cat. No.:	HY-76200		
CAS No.:	137234-62-9		
Molecular Formula:	C ₁₆ H ₁₄ F ₃ N ₅ O		
Molecular Weight:	349.31		
Target:	Fungal; Bacterial		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 50 mg/mL (143.14 mM)
 H₂O : 0.17 mg/mL (0.49 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.8628 mL	14.3139 mL	28.6279 mL
	5 mM	0.5726 mL	2.8628 mL	5.7256 mL
	10 mM	0.2863 mL	1.4314 mL	2.8628 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (7.16 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.16 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Voriconazole (UK-109496) is a second-generation, broad-spectrum triazole antifungal agent that inhibits fungal ergosterol biosynthesis. Voriconazole exerts its antifungal activity by inhibition of 14-α-lanosterol demethylation, which is mediated by fungal cytochrome P450 enzymes^{[1][2]}.

In Vitro

Voriconazole has great activity against *S. apiospermum* and *C. neoformans* with the MICs of 0.5 μg/mL and 0.125-0.25 μg/mL.

g/mL, respectively^[1].

Voriconazole inhibits the cytochrome P450 (CYP)-dependent enzyme 14-alpha-sterol demethylase, thereby disrupting the cell membrane and halting fungal growth^[2].

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

In Vivo

Voriconazole (5-20 mg/kg; p.o. for 21 days) prolongs survival in a dose-dependent fashion. Voriconazole (40 mg/kg/day) decreases the fungal burden in the lungs^[3].

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

Animal Model:	Male specific-pathogen-free BALB/cByJ mice ^[3]
Dosage:	1, 5, 20 mg/kg/day
Administration:	P.o. once daily for 21 days
Result:	Improved survival in a dose-response fashion, with median survival times (MSTs) of 21, 28, and 35 days with doses of 1, 5, and 20 mg/kg, respectively.

CUSTOMER VALIDATION

- Transl Res. 2022 Apr 20;S1931-5244(22)00073-1.
- Front Cell Infect Microbiol. 2020 Jun 26;10:320.
- Infect Drug Resist. 2022: 7459-7473.
- J Mycol Med. 9 November 2021, 101227.
- Med Mycol. 2018 Jun 1;56(4):452-457.

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REFERENCES

[1]. Nickie D Greer, et al. Voriconazole: the newest triazole antifungal agent. Proc (Bayl Univ Med Cent). 2003 Apr;16(2):241-8.

Caution: Product has not been fully validated for medical applications. For research use only.

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