Neticonazole

Cat. No.: HY-106541 CAS No.: 130726-68-0 Molecular Formula: $C_{17}H_{22}N_{2}OS$ Molecular Weight: 302.43 Target: Fungal

Pathway: Anti-infection

Storage: Powder -20°C 3 years

2 years

In solvent -80°C 2 years

> -20°C 1 year

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Product Data Sheet

SOLVENT & SOLUBILITY

In Vitro

DMSO: 250 mg/mL (826.64 mM; Need ultrasonic)

1M HCl: 100 mg/mL (330.66 mM; ultrasonic and adjust pH to 1 with HCl)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	3.3066 mL	16.5328 mL	33.0655 mL
	5 mM	0.6613 mL	3.3066 mL	6.6131 mL
	10 mM	0.3307 mL	1.6533 mL	3.3066 mL

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

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 6.25 mg/mL (20.67 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% corn oil

Solubility: ≥ 6.25 mg/mL (20.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Neticonazole is an imidazole derivative and a potent and long-acting antifungal agent. Neticonazole has anti-infection and anti-cancer effects ^{[1][2][3]} .
IC ₅₀ & Target	Fungal [1]
In Vitro	Neticonazole (10 µM; 48 hours; C4-2B cells) treatment decreases the levels of both Alix and Rab27a, and significantly decreases nSMase2 levels. Neticonazole causes a significant inhibition in p-ERK levels ^[2] . Neticonazole (0-10 µM) exhibits a potent and dose-dependent inhibition of exosome release from C4-2B cells ^[2] . Neticonazole is also an orally active exosome biogenesis and secretion inhibitor ^[3] .

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

Western Blot Analysis ^[2]

Cell Line:	C4-2B cells
Concentration:	10 μΜ
Incubation Time:	48 hours
Result:	Decreased the levels of both Alix and Rab27a, and significantly decreased nSMase2 levels.

In Vivo

Neticonazole (1-100 ng/kg; oral gavage; daily; for 15 days; male C57BL/6 mice) treatment significantly improves the survival of intestinal dysbacteriosis (IDB) mice with colorectal cancer (CRC) xenograft tumors, likely through increasing apoptosis of CRC xenograft tumor cells^[3].

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Animal Model:	Male C57BL/6 mice (8 weeks old) given ampicillin, neomycin, metronidazole and vancomycin, and injected with SW480 cells ^[3]	
Dosage:	1 ng/kg, 10 ng/kg and 100 ng/kg	
Administration:	Oral gavage; daily; for 15 days	
Result:	Significantly improved the survival of IDB mice with CRC xenograft tumors.	

REFERENCES

- [1]. Tsuboi R, et al. Hyperkeratotic chronic tinea pedis treated with neticonazole cream. Neticonazole Study Group. Int J Dermatol. 1996 May;35(5):371-3.
- [2]. Datta A, et al. High-throughput screening identified selective inhibitors of exosome biogenesis and secretion: A drug repurposing strategy for advanced cancer. Sci Rep. 2018 May 25;8(1):8161.
- [3]. Gu L, et al. The exosome secretion inhibitor neticonazole suppresses intestinal dysbacteriosis-induced tumorigenesis of colorectal cancer. Invest New Drugs. 2020 Apr;38(2):221-228.

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

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