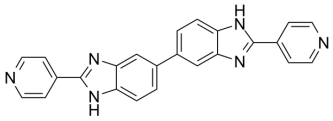
Ridinilazole

Cat. No.:	HY-16753
CAS No.:	308362-25-6
Molecular Formula:	$C_{24}H_{16}N_6$
Molecular Weight:	388
Target:	Bacterial
Pathway:	Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (64.43 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5773 mL	12.8866 mL	25.7732 mL
5 mM	0.5155 mL	2.5773 mL	5.1546 mL
10 mM	0.2577 mL	1.2887 mL	2.5773 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: ≥ 2.5 mg/mL (6.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ridinilazole is a novel antibacterial with MICs range of 0.06-0.25 μg/mL (MIC_{90}=8 μg/mL) against C. difficile.

IC_{50} & Target

MIC_{90}: 8 μg/mL (C. difficile)[1]

In Vitro

Ridinilazole is a novel antibacterial that does not appear to act through the classical pathways associated with antibiotics, such as inhibition of cell wall, protein, lipid, RNA or DNA synthesis. Ridinilazole may impair cell division. Ridinilazole is bactericidal against C. difficile and exhibits a prolonged post-antibiotic effect. In susceptibility testing of 82 clinical isolates of C. difficile (including ribotype 027), Ridinilazole displays potent growth inhibition and has lower MICs [MIC range, 0.06-0.25 μg/mL; MIC for 90% of the organisms (MIC90), 0.125 μg/mL] than Metronidazole (MIC range, 0.125-8 μg/mL; MIC_{90}, 8 μg/mL) or Vancomycin (MIC range, 0.5-4 μg/mL; MIC_{90}, 2 μg/mL). Similarly, Ridinilazole is found to be more potent than Metronidazole or Vancomycin at inhibiting the growth of 50 ribotype-defined C. difficile strains. The activity of Ridinilazole against specific C. difficile ribotypes (including ribotypes 001, 002, 005, 014, 027, 054 and 106) is similar, with an MIC range of

	0.06–0.5 μg/mL and an MIC_{90} of 0.125 μg/mL. In addition, Ridinilazole is more active against 11 ribotype 027 strains than either Metronidazole or Vancomycin[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In a hamster model of CDI with a once-daily dosing regimen, Ridinilazole displays greater efficacy than Vancomycin both against non-epidemic and epidemic strains of C. difficile. Similar to the twice-daily dosing study, plasma levels of Ridinilazole are below the level of detection, whereas caecal Ridinilazole concentrations are well above the MIC, thus demonstrating the non-absorbable nature of Ridinilazole and minimal systemic exposure[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Vickers RJ, et al. Ridinilazole: a novel therapy for Clostridium difficile infection. Int J Antimicrob Agents. 2016 Aug;48(2):137-43.

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