Clinafloxacin

Cat. No.: HY-B0536

CAS No.: 105956-97-6

Molecular Formula: $C_{17}H_{17}ClFN_3O_3$

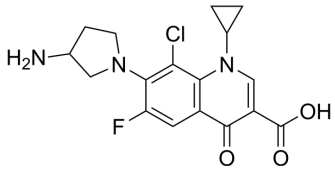
Molecular Weight: 365.79

Target: Bacterial; Antibiotic

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 : 2 mg/mL (5.47 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7338 mL	13.6690 mL	27.3381 mL
	5 mM	0.5468 mL	2.7338 mL	5.4676 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Clinafloxacin (AM 1091) is a potent and broad-spectrum fluoroquinolone antibiotic, has inhibitory activity against gram-positive, gram-negative bacterias, and anaerobic pathogens in vitro[1]. Clinafloxacin is against DNA gyrase and topoisomerase IV of S. aureus with IC_{50} values of 0.92 μg/ml and 1.62 μg/ml, respectively[2].

IC_{50} & Target

Quinolone

In Vitro

Clinafloxacin exhibits activity against S. pneumonia with an MIC of 1μg/ml for the parC-gyrA mutants[2].
Clinafloxacin hydrochloride has antibacterial activities against target-altered mutant strains of S. aureus. It against Wild type S. aureus, gyrA mutant S. aureus and gyrA mutant S. aureus with MIC values of 0.016 μg/ml, 0.063 μg/ml and 0.915 μg/ml, respectively[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Clinafloxacin is very effective for the therapy of penicillin-resistant, ciprofloxacin-susceptible pneumococcal meningitis in the rabbit model.
With the CS strain (2349)(Clinafloxacin MIC=0.12 μg/ml), at a dose of 10 mg/kg and 20 mg/kg per day Clinafloxacin achieves

an initial reduction at 6 hr. Both are bactericidal at this point but presents regrowth at 24 hr, and the final reduction at 24 hr in mean log cfu/ml is 22.30 and 23.83, respectively. However, With the CR strain (4371)(Clinafloxacin MIC=0.5 μg/ml), Clinafloxacin even at 20 mg/kg per day does not decrease bacterial titers at any time point in this rabbit model of meningitis [3].

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

REFERENCES

[1]. M Takei, et al. Target preference of 15 quinolones against Staphylococcus aureus, based on antibacterial activities and target inhibition.Antimicrob Agents Chemother. 2001 Dec;45(12):3544-7.

[2]. Randa H Abdelkreem, et al. DNA Gyrase and Topoisomerase IV Mutations and their effect on Quinolones Resistant Proteus mirabilis among UTIs Patients. Pak J Med Sci. Sep-Oct 2020;36(6):1234-1240.

[3]. A Domenech, et al. Experimental study of clinafloxacin alone and in combination in the treatment of ciprofloxacin-susceptible and -resistant pneumococcal meningitis.Microb Drug Resist. 2003;9 Suppl 1:S53-9.

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