Nemonoxacin malate

Cat. No.: HY-111023

CAS No.: 951163-60-3

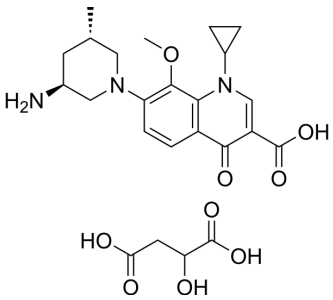
Molecular Formula: $C_{24}H_{31}N_3O_9$

Molecular Weight: 505.52

Target: Antibiotic; Bacterial

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (197.82 mM; Need ultrasonic)
H_2O : 25 mg/mL (49.45 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9782 mL	9.8908 mL	19.7816 mL
5 mM	0.3956 mL	1.9782 mL	3.9563 mL
10 mM	0.1978 mL	0.9891 mL	1.9782 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.95 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nemonoxacin (TG-873870) malate is a nonfluorinated quinolone antibiotic. Nemonoxacin malate has broad-spectrum activity against Gram-positive, Gram-negative and atypical pathogens. Nemonoxacin malate can inhibit drug-resistant Streptococcus pneumoniae and (HY-121544) Methicillin-resistant Staphylococcus aureus. Nemonoxacin malate can be used for the research of community-acquired pneumonia[1][2].

IC_{50} & Target

Quinolone

In Vitro

Nemonoxacin has antibacterial activity against Chlamydia pneumoniae with MIC_{90}s of 0.06 μg/mL[1].

Nemonoxacin has highly active against community-acquired MRSA (CA-MRSA) (MIC_{90}: 0.5 and 0.06 μg/ml), and exerts limited activity against (HY-B0356) Ciprofloxacin-resistant MRSA (MIC_{90}: 1 μg/ml), and (HY-B0671) Vancomycin-intermediate MRSA (MIC_{90}: 2 μg/ml)[2].

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

REFERENCES

[1]. Chotikanatis K, et al. In vitro activity of nemonoxacin, a novel nonfluorinated quinolone antibiotic, against Chlamydia trachomatis and Chlamydia pneumoniae. Antimicrob Agents Chemother. 2014;58(3):1800-1.

[2]. Lai CC, et al. Nemonoxacin (TG-873870) for treatment of community-acquired pneumonia. Expert Rev Anti Infect Ther. 2014 Apr;12(4):401-17.

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