Merafloxacin

Cat. No.: HY-139010

CAS No.: 91188-00-0

Molecular Formula: $C_{19}H_{23}F_2N_3O_3$

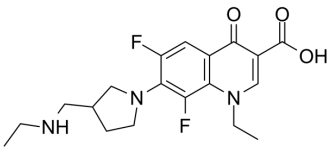
Molecular Weight: 379.4

Target: SARS-CoV

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 11.11 mg/mL (29.28 mM; ultrasonic and adjust pH to 3 with HCl)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6357 mL	13.1787 mL	26.3574 mL
5 mM	0.5271 mL	2.6357 mL	5.2715 mL
10 mM	0.2636 mL	1.3179 mL	2.6357 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: ≥ 1.11 mg/mL (2.93 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.11 mg/mL (2.93 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Merafloxacin (CI-934), a fluoroquinolone antibacterial agent, is a selective programmed -1 ribosomal frameshifting (-1 PRF) inhibitor of beta coronaviruses. Merafloxacin exhibits in vitro activity against gram-positive and gram-negative bacteria[1][2].

IC_{50} & Target

IC50: 19.6 μM (SARS-CoV-2)[1]

In Vitro

Merafloxacin (5-80 μM) dose-dependently inhibits programmed -1 ribosomal frameshifting (-1 PRF) of SARS-CoV-2, SARS-CoV, hCoVO-C43, and hCoV-HKU1, with IC_{50}s of 19.6 μM, 19.5 μM, 29.7 μM, and 38.6 μM, respectively[1].

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

REFERENCES

[1]. Sun Y, et, al. Restriction of SARS-CoV-2 Replication by Targeting Programmed -1 Ribosomal Frameshifting In Vitro. bioRxiv. 2020 Oct 21;2020.10.21.349225.

[2]. Mandell W, et, al. In vitro activity of CI-934, a new quinolone, compared with that of other quinolones and other antimicrobial agents. Antimicrob Agents Chemother. 1986 May;29(5):852-7.

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

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