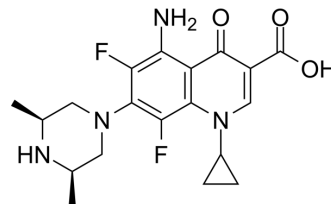


Sparfloxacin

Cat. No.:	HY-B0308
CAS No.:	110871-86-8
Molecular Formula:	C ₁₉ H ₂₂ F ₂ N ₄ O ₃
Molecular Weight:	392.4
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	0.1 M NaOH : 50 mg/mL (127.42 mM; ultrasonic and adjust pH to 11 with NaOH)
	DMSO : 3.33 mg/mL (8.49 mM; Need ultrasonic)
	H ₂ O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		Concentration	1 mg	5 mg	10 mg
	1 mM		2.5484 mL	12.7421 mL	25.4842 mL
	5 mM		0.5097 mL	2.5484 mL	5.0968 mL
	10 mM		0.2548 mL	1.2742 mL	2.5484 mL

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

BIOLOGICAL ACTIVITY

Description	Sparfloxacin (CI-978) is a fluoroquinolone antibiotic, shows broad and potent antibacterial activity ^[1] .
IC ₅₀ & Target	Quinolone
In Vitro	<p>Sparfloxacin (CI-978) shows broad and potent antibacterial activity. Its MICs for 90% of the strains tested are 0.1 to 0.78 μg/ml against gram-positive organisms, such as members of the genera Staphylococcus, Streptococcus and Enterococcus, and 0.0125 to 1.56 μg/ml against gram-negative organisms, such as members of the family Enterobacteriaceae and the genera Pseudomona. Its MICs are 0.025 to 0.78 μg/ml against glucose nonfermenters, 0.2 to 0.78 μg/ml against anaerobes, 0.0125 to 0.05 μg/ml against Legionella. Sparfloxacin (CI-978) showed good oral efficacy against systemic infections with Staphylococcus aureus, Streptococcus pyogenes, Streptococcus pneumoniae, Escherichia coli, and Pseudomonas aeruginosa in mice^[1]. Sparfloxacin targets DNA gyrase and inhibits DNA synthesis^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

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- [1]. Nakamura, S., et al., In vitro and in vivo antibacterial activities of AT-4140, a new broad-spectrum quinolone. *Antimicrob Agents Chemother*, 1989. 33(8): p. 1167-73.
- [2]. Pan, X.S. and L.M. Fisher, Targeting of DNA gyrase in *Streptococcus pneumoniae* by sparfloxacin: selective targeting of gyrase or topoisomerase IV by quinolones. *Antimicrob Agents Chemother*, 1997. 41(2): p. 471-4.
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Caution: Product has not been fully validated for medical applications. For research use only.

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