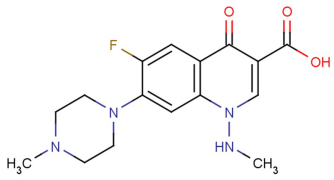
Data Sheet (Cat.No.T17254)

TargetMol
A DRUG SCREENING EXPERT

Amifloxacin

Chemical Properties



CAS No.:	86393-37-5
Formula:	C16H19FN4O3
Molecular Weight:	334.35
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Amifloxacin is a synthetic antibacterial compound of the quinolone class.
Targets(IC_{50})	Antibacterial: None
In vitro	Amifloxacin is active in vitro against Pseudomonas aeruginosa isolates. Amifloxacin also displays moderate activity against Staphylococcus aureus (MICs: less than or equal to 2 μg/mL).
In vivo	Amifloxacin is highly active by the oral route, with 50% effective doses within two- to threefold of those obtained with parenteral medication. When mice infected intraperitoneally with E. coli Vogel are medicated at 0.5-h postinfection subcutaneously, intravenously, or orally the (ED50s for Amifloxacin: 0.6, 0.8, and 1.0 mg/kg, respectively). Blood levels of radioactivity after i.v. administration of [14C]Amifloxacin mesylate to rats at 20 mg/kg decrease from 29.1±0.85 μg/mL at 1.0 min to 14.4±0.52 μg/mL at 10 min. From 0.25 to 4 h blood radioactivity decreases from 13.0±0.42 μg/mL to 0.97±0.09 μg/mL in a log-linear manner. The rate of elimination from 4 to 24 h is slower and more complex. At 24 h, blood radioactivity is equivalent to 0.12±0.01 ug/mL. Blood radioactivity peaks at 0.5 h after oral administration of [14C]Amifloxacin mesylate to rats at 20 mg/kg and is equivalent to 7.1±0.26 μg of Amifloxacin per mL. From 0.75 to 4 h, blood radioactivity decreases rapidly from 7.0±0.25 μg/mL to 1.2±0.12 μg/mL. Between 8 and 48 h the rate of decline in blood radioactivity slows and is more complex. At 48 h, the blood radioactivity is equivalent to 0.14±0.02 μg/mL [1][2].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.991 mL	14.954 mL	29.909 mL
5 mM	0.598 mL	2.991 mL	5.982 mL
10 mM	0.299 mL	1.495 mL	2.991 mL
50 mM	0.06 mL	0.299 mL	0.598 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Cornett JB, et al. In vitro and in vivo antibacterial activities of the fluoroquinolone WIN 49375 (amifloxacin). Antimicrob Agents Chemother. 1985 Jan;27(1):4-10.

2. Johnson JA, et al. Metabolism and disposition of amifloxacin in laboratory animals. Antimicrob Agents Chemother. 1985 May;27(5):774-81.

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