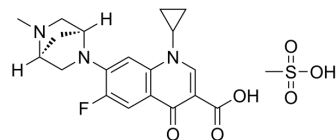


Danofloxacin mesylate

Cat. No.:	HY-B0501
CAS No.:	119478-55-6
Molecular Formula:	C ₂₀ H ₂₄ FN ₃ O ₆ S
Molecular Weight:	453.48
Target:	Bacterial; Antibiotic
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

H₂O : 100 mg/mL (220.52 mM; Need ultrasonic)
DMSO : 20 mg/mL (44.10 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.2052 mL	11.0258 mL	22.0517 mL
	5 mM	0.4410 mL	2.2052 mL	4.4103 mL
	10 mM	0.2205 mL	1.1026 mL	2.2052 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 50 mg/mL (110.26 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2 mg/mL (4.41 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2 mg/mL (4.41 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2 mg/mL (4.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Danofloxacin mesylate (CP 76136-27) is a fluoroquinolone antibacterial for veterinary use. Target: Antibacterial. Danofloxacin mesylate (CP 76136-27) is a synthetic antibacterial agent of the fluoroquinolone class, acts principally by the inhibition of bacterial DNA-gyrase, which is necessary for supercoiling of DNA to provide a suitable spatial arrangement of DNA within the bacterial cell. The minimum inhibitory concentration of danofloxacin against 90% (MIC90) of contemporary European and North American field isolates of *Pasteurella haemolytica*, *Pasteurella multocida* and *Haemophilus somnus*, the most important bacterial respiratory pathogens of cattle, is 0.125 µg/ml [1]. Danofloxacin mesylate (CP 76136-27) shows

	protective dose (PD50) of 0.38, 0.8, 2.42 mg/kg for <i>P. multocida</i> , <i>E. coli</i> and <i>S. choleraesuis</i> in in vivo mouse protection assay [2].
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IC₅₀ & Target	Quinolone
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REFERENCES

[1]. Giles, C.J., et al., Clinical pharmacokinetics of parenterally administered danofloxacin in cattle. *J Vet Pharmacol Ther*, 1991. 14(4): p. 400-10.

[2]. McGuirk, P.R., et al., Synthesis and structure-activity relationships of 7-diazabicycloalkylquinolones, including danofloxacin, a new quinolone antibacterial agent for veterinary medicine. *J Med Chem*, 1992. 35(4): p. 611-20.

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

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