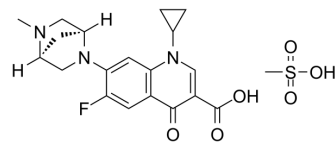


## Danofloxacin mesylate

<b>Cat. No.:</b>	HY-B0501
<b>CAS No.:</b>	119478-55-6
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>24</sub> FN <sub>3</sub> O <sub>6</sub> S
<b>Molecular Weight:</b>	453.48
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	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

H<sub>2</sub>O : 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: 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 *P. multocida*, *E. coli* and *S. choleraesuis* in in vivo mouse protection assay [2].

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## REFERENCES

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

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