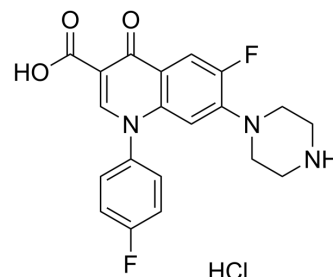


Sarafloxacin hydrochloride

Cat. No.:	HY-B0343A
CAS No.:	91296-87-6
Molecular Formula:	C ₂₀ H ₁₈ ClF ₂ N ₃ O ₃
Molecular Weight:	421.83
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	DMSO : 8.33 mg/mL (19.75 mM; Need ultrasonic)					
	H ₂ O : 1 mg/mL (2.37 mM; ultrasonic and warming and heat to 60°C)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.3706 mL	11.8531 mL	23.7062 mL
5 mM			0.4741 mL	2.3706 mL	4.7412 mL	
10 mM		0.2371 mL	1.1853 mL	2.3706 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: ≥ 0.83 mg/mL (1.97 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.83 mg/mL (1.97 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.83 mg/mL (1.97 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Sarafloxacin (hydrochloride) (A-56620 (hydrochloride)) is a quinolone antibiotic agent.
IC₅₀ & Target	Quinolone
In Vitro	Sarafloxacin (hydrochloride) is a fluoroquinolone antibiotic registered for use against poultry diseases. Sarafloxacin treatment demonstrated mineralization to 14CO ₂ amounting to 0.58%, 0.49%, and 0.57% in loam, silt loam, and sandy loam soils, respectively, at the termination of the test ^[1] . The inhibitory level of sarafloxacin for the tested bacteria was strain dependent. It appeared that in broth culture Escherichia coli isolates were sensitive to sarafloxacin concentrations 5-fold

lower than the concentrations present in the simulated gut model, suggesting that sarafloxacin may be partially unavailable due to absorption to organic matter in the model^[2].

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

In Vivo

Administering Sarafloxacin (hydrochloride) in the feed for 5 d at a dose of 10 or 12.5 mg/kg of fish proved efficacious in treating channel catfish infected with *E. ictaluri* in all three field trials. Average survival of the nonmedicated group was 43% in trial 1, 11% in trial 2, and 59% in trial 3. Survival of the corresponding Sarafloxacin hydrochloride-medicated groups averaged 68, 48, and 73%. Antibiotic therapy with Sarafloxacin hydrochloride significantly ($P < 0.05$) improves survival in all trials^[3].

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

CUSTOMER VALIDATION

- J Biol Chem. 2021 Dec 29;101554.
- Microb Pathog. 2023 Apr 22;106122.

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REFERENCES

- [1]. Marengo, J.R., et al., Aerobic biodegradation of (14C)-sarafloxacin hydrochloride in soil. *Environmental Toxicology and Chemistry*, 1997. 16(3): p. 462-471.
- [2]. McConville, M.L., et al., Effects of sarafloxacin hydrochloride on human enteric bacteria under simulated human gut conditions. *Vet Q*, 1995. 17(1): p. 1-5.
- [3]. Johnson, M.R., K.L. Smith, and C.R. Boyle, Field efficacy trials of the antibacterial sarafloxacin-hydrochloride (A-56620) for treatment of *Edwardsiella ictaluri* infections in channel catfish. *Journal of aquatic animal health*, 1992. 4(4): p. 244-251.

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

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