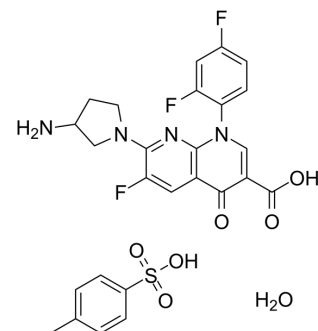


Tosufloxacin tosylate hydrate

Cat. No.:	HY-B1802A
CAS No.:	1400591-39-0
Molecular Formula:	C ₂₆ H ₂₅ F ₃ N ₄ O ₇ S
Molecular Weight:	595
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 : 12.5 mg/mL (21.01 mM; Need ultrasonic)					
	H ₂ O : < 0.1 mg/mL (insoluble)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		1.6807 mL	8.4034 mL	16.8067 mL
5 mM			0.3361 mL	1.6807 mL	3.3613 mL	
	10 mM		0.1681 mL	0.8403 mL	1.6807 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: 1.25 mg/mL (2.10 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.25 mg/mL (2.10 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (2.10 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Tosufloxacin tosylate hydrate (A-61827) is an orally active fluoroquinolone antibiotic. Tosufloxacin shows a broad spectrum of antibacterial activity against gram-positive and gram-negative bacteria ^{[1][2]} .
IC₅₀ & Target	Quinolone
In Vitro	Tosufloxacin tosylate hydrate (T-3262) (0.05-3.13 μg/mL; 18 h) shows antibacterial activities against <i>S. aureus</i> , <i>Staphylococcus epidermidis</i> , streptococci, enterococci, <i>Bacteroides fragilis</i> , <i>Clostridium difficile</i> , and <i>Clostridium perfringens</i> ^[2] .

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

Cell Viability Assay^[2]

Cell Line:	S. aureus, Staphylococcus epidermidis, streptococci, enterococci, Bacteroides fragilis, Clostridium difficile, and Clostridium perfringens
Concentration:	0.05-3.13 µg/mL
Incubation Time:	18 hours
Result:	Showed MIC _{90S} (MICs for 90% of the isolates tested) ranging from 0.05 to 1.56 µg/mL for S. aureus, Staphylococcus epidermidis, streptococci, and enterococci. Showed MIC _{90S} of 1.56, 3.13, and 0.20 µg/mL for Bacteroides fragilis, Clostridium difficile, and Clostridium perfringens, respectively.

In Vivo

Tosufloxacin tosylate hydrate (T-3262) (oral gavage; 0.16-13.39 mg/kg; once) treatment shows antibacterial activity against S. aureus, E. coli, and P. aeruginosa in vivo^[2].

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

Animal Model:	Male Slc:ICR mice infected with S. aureus ^[2]
Dosage:	1.27-2.15 mg/kg
Administration:	Oral gavage; 1.27-2.15 mg/kg; once
Result:	Showed 50% effective dose (ED ₅₀) of 1.62 mg/kg (body weight) at 7 days after infection. Showed MIC value of 0.0125 µg/mL.

Animal Model:	Male Slc:ICR mice infected with E. coli ^[2]
Dosage:	0.16-0.30 mg/kg
Administration:	Oral gavage; 0.16-0.30 mg/kg; once
Result:	Showed 50% effective dose (ED ₅₀) of 0.22 mg/kg (body weight) at 7 days after infection. Showed MIC value of 0.0125 µg/mL.

Animal Model:	Male Slc:ICR mice infected with P. aeruginosa ^[2]
Dosage:	7.66-13.39 mg/kg
Administration:	Oral gavage; 7.66-13.39 mg/kg; once
Result:	Showed 50% effective dose (ED ₅₀) of 10.13 mg/kg (body weight) at 7 days after infection. Showed MIC value of 0.78 µg/mL.

CUSTOMER VALIDATION

- PLoS Negl Trop Dis. 2019 Aug 20;13(8):e0007681.
- Curr Microbiol. 2021 Dec 14;79(1):12.

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REFERENCES

- [1]. Chu DT, et al. Synthesis and biological properties of A-71497: a prodrug of tosufloxacin. *Drugs Exp Clin Res.* 1990;16(9):435-43.
- [2]. Fujimaki K, et al. In vitro and in vivo antibacterial activities of T-3262, a new fluoroquinolone. *Antimicrob Agents Chemother.* 1988 Jun;32(6):827-33.
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Caution: Product has not been fully validated for medical applications. For research use only.

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