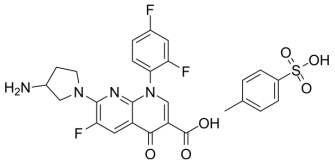
Tosufloxacin tosylate

Cat. No.:	HY-B1802C
CAS No.:	115964-29-9
Molecular Formula:	$C_{26}H_{23}F_3N_4O_6S$
Molecular Weight:	576.54
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Tosufloxacin (A-61827) tosylate is an orally active fluoroquinolone antibiotic. Tosufloxacin tosylate shows a broad spectrum of antibacterial activity against gram-positive and gram-negative bacteria[1][2].

In Vitro

Tosufloxacin tosylate hydrate (T-3262) (0.05-3.13 μg/mL; 18 h) shows antibacterial activities against S. aureus, Staphylococcus epidermidis, streptococci, enterococci, Bacteroides fragilis, Clostridium difficile, and Clostridium perfringens[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_{90}s (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_{90}s 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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