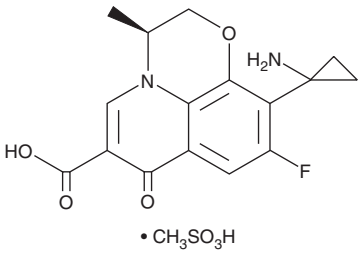
PRODUCT INFORMATION

Pazufloxacin (mesylate)

Item No. 29249

CAS Registry No.:	163680-77-1
Formal Name:	10-(1-aminocyclopropyl)-9-fluoro-2,3-dihydro-3-methyl-7-oxo-7H-pyrido[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid monomethanesulfonate
Synonyms:	Pazufloxacin methanesulfonate, T-3762
MF:	$C_{16}H_{15}FN_2O_4 \bullet CH_3SO_3H$
FW:	414.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 239, 318 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pazufloxacin (mesylate) is supplied as a crystalline solid. A stock solution may be made by dissolving the pazufloxacin (mesylate) in the solvent of choice, which should be purged with an inert gas. Pazufloxacin (mesylate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of pazufloxacin (mesylate) in these solvents is approximately 1, 25, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of pazufloxacin (mesylate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pazufloxacin (mesylate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pazufloxacin is a broad-spectrum synthetic fluoroquinolone antibiotic.[1] It is active against Gram-negative and Gram-positive bacteria, including clinical isolates of *E. coli*, *K. pneumoniae*, methicillin-susceptible and -resistant *S. aureus*, and methicillin-susceptible and -resistant *S. epidermidis* (MIC_{90}s = 0.05, 0.1, 0.39, 12.5, 0.39, and 6.25 µg/ml, respectively). It inhibits *E. coli*, *P. aeruginosa*, and *S. aureus* DNA gyrase (IC_{50}s = 0.88, 1.9, and 10.2 µg/ml, respectively) and *S. aureus* topoisomerase IV (IC_{50} = 24.2 µg/ml) in cell-free assays.[1,2] *In vivo*, pazufloxacin is active against systemic *E. coli*, *K. pneumoniae*, and methicillin-resistant *S. aureus* infections in mice (ED_{50}s = 0.15, 5.5, and 4.5 mg/kg, respectively).[3]

References

1. Muratani, T., Inoue, M., and Mitsuhashi, S. In vitro activity of T-3761, a new fluoroquinolone. *Antimicrob. Agents Chemother.* **36(10),** 2293-2303 (1992).
2. Takei, M., Fukuda, H., Kishii, R., *et al.* Target preference of 15 quinolones against Staphylococcus aureus, based on antibacterial activities and target inhibition. *Antimicrob. Agents Chemother.* **45(12),** 3544-3547 (2001).
3. Fukuoka, Y., Ikeda, Y., Yamashiro, Y., *et al.* In vitro and in vivo antibacterial activities of T-3761, a new quinolone derivative. *Antimicrob. Agents Chemother.* **37(3),** 384-392 (1993).

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