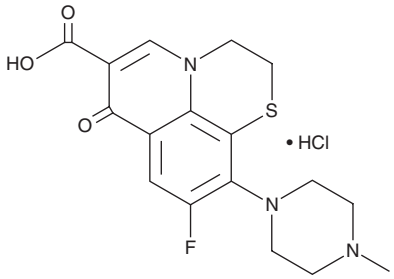
PRODUCT INFORMATION

Rufloxacin (hydrochloride)

Item No. 21413

CAS Registry No.: 106017-08-7
Formal Name: 9-fluoro-2,3-dihydro-10-(4-methyl-1-piperazinyl)-7-oxo-7H-pyrido[1,2,3-de]-1,4-benzothiazine-6-carboxylic acid, monohydrochloride
MF: $C_{17}H_{18}FN_3O_3S \bullet HCl$
FW: 399.9
Purity: ≥98%
UV/Vis.: λ_{max}: 245, 299, 341 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

Rufloxacin (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the rufloxacin (hydrochloride) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Rufloxacin is a fluoroquinolone antibiotic.[1] It is active against *S. aureus*, *E. coli*, *P. aeruginosa*, *P. morganii*, *K. pneumoniae*, and *E. cloacae in vitro* (MICs = 0.78, 0.78, 12.5, 1.56, <0.39, and <0.39 µg/ml, respectively).[2] Rufloxacin inhibits *M. luteus* DNA gyrase with an IC_{50} value of 1.5 mM and inhibits DNA synthesis in *S. aureus*, *E. coli*, *P. aeruginosa*, *K. pneumoniae*, and *E. cloacae* (IC_{50}s = 0.93, 1.03, 38.8, 0.55, and 0.66 µg/ml, respectively).[1,3] Rufloxacin (50 mg/kg, p.o.) reduces bacterial burden in the spleen and liver in a mouse model of systemic *S. typhimurium* infection.[4]

References

1. Piddock, L.J.V., Panchal, S., and Norte, V. Comparison of the mechanism of action and resistance of two new fluoroquinolones, rufloxacin and MF961 with those of ofloxacin and fleroxacin in Gram-negative and Gram-positive bacteria. *J. Antimicrob. Chemother.* **31(6)**, 855-863 (1993).
2. Cecchetti, V., Fravolini, A., Fringuelli, R., *et al.* Quinolonecarboxylic acids. 2. Synthesis and antibacterial evaluation of 7-oxo-2,3-dihydro-7H-pyrido[1,2,3-de][1,4]benzothiazine-6-carboxylic acids. *J. Med. Chem.* **30(3)**, 465-473 (1987).
3. Fabbri, S., Broggini, M., Pagella, P., *et al.* The inhibition of supercoiling activity of DNA gyrase from *Micrococcus luteus* caused by rufloxacin (MF 934) and MF 961. *J. Antimicrob. Chemother.* **27(5)**, 687-689 (1991).
4. Bonina, L., Carbone, M., Mastroeni, P., *et al.* Effects of rufloxacin in *Salmonella typhimurium* infection in mice. *J. Chemother.* **4(6)**, 353-357 (1992).

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