

# PRODUCT INFORMATION

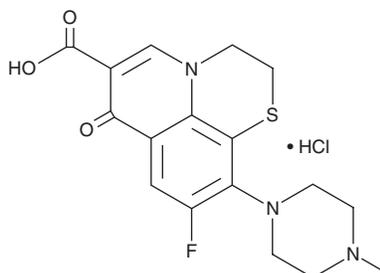


## Rufloxacin (hydrochloride)

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<sub>17</sub>H<sub>18</sub>FN<sub>3</sub>O<sub>3</sub>S • HCl  
**FW:** 399.9  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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.<sup>1</sup> It is active against *S. aureus*, *E. coli*, *P. aeruginosa*, *P. morgani*, *K. pneumoniae*, and *E. cloacae* *in vitro* (MICs = 0.78, 0.78, 12.5, 1.56, <0.39, and <0.39 µg/ml, respectively).<sup>2</sup> Rufloxacin inhibits *M. luteus* DNA gyrase with an IC<sub>50</sub> value of 1.5 mM and inhibits DNA synthesis in *S. aureus*, *E. coli*, *P. aeruginosa*, *K. pneumoniae*, and *E. cloacae* (IC<sub>50</sub>s = 0.93, 1.03, 38.8, 0.55, and 0.66 µg/ml, respectively).<sup>1,3</sup> Rufloxacin (50 mg/kg, p.o.) reduces bacterial burden in the spleen and liver in a mouse model of systemic *S. typhimurium* infection.<sup>4</sup>

### 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., Brogini, 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/01/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM