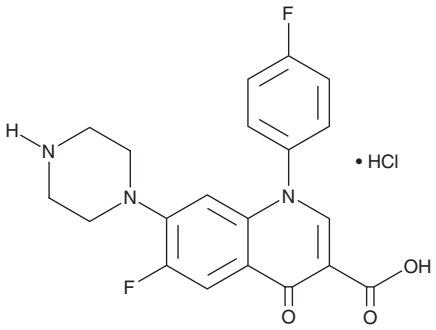
PRODUCT INFORMATION

Sarafloxacin (hydrochloride)

Item No. 20299

CAS Registry No.:	91296-87-6
Formal Name:	6-fluoro-1-(4-fluorophenyl)-1,4-dihydro-4-oxo-7-(1-piperazinyl)-3-quinolinecarboxylic acid, monohydrochloride
MF:	$C_{20}H_{17}F_2N_3O_3$ • HCl
FW:	421.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 280, 318, 330 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Sarafloxacin (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the sarafloxacin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Sarafloxacin (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of sarafloxacin (hydrochloride) in these solvents is approximately 2 and 5 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 sarafloxacin (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sarafloxacin (hydrochloride) in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sarafloxacin is a fluoroquinolone antibiotic.[1,2] It is active against various clinical isolates of bacteria, including *Bacteroides*, *Fusobacterium*, *Eubacterium*, *Actinomyces*, and *Peptococcus* (MICs = 0.5-2 µg/ml).[1] Sarafloxacin inhibits *P. aeruginosa* DNA gyrase.[3] It decreases air sac lesion severity in a chick model of *E. coli*-induced colisepticemia when administered at a dose of 8 mg/kg in the drinking water 24 hours per day for five days.[2] Formulations containing sarafloxacin have previously been used in the treatment of bacterial infections in poultry.

References

1. Bansal, M. B. and Thadepalli, H. Activity of difloxacin (A-56619) and A-56620 against clinical anaerobic bacteria in vitro. *Antimicrob. Agents Chemother.* **31(4)**, 619-621 (1987).
2. Charleston, B., Gate, J. J., Aitken, I. A., *et al.* Comparison of the efficacies of three fluoroquinolone antimicrobial agents, given as continuous or pulsed-water medication, against *Escherichia coli* infection in chickens. *Antimicrob. Agents Chemother.* **42(1)**, 83-87 (1998).
3. Moir, D.T., Di, M., Opperman, T., *et al.* A high-throughput, homogeneous, bioluminescent assay for *Pseudomonas aeruginosa* gyrase inhibitors and other DNA-damaging agents. *J. Biomol. Screen.* **12(6)**, 855-864 (2007).

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