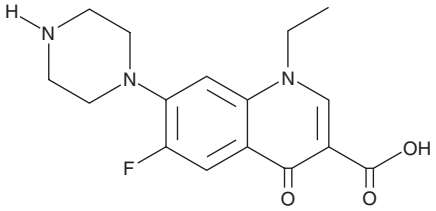
PRODUCT INFORMATION

Norfloxacin

Item No. 25975

CAS Registry No.:	70458-96-7
Formal Name:	1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-3-quinolinecarboxylic acid
MF:	$C_{16}H_{18}FN_3O_3$
FW:	319.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 226, 285 nm
Supplied as:	A crystalline solid
Storage:	4°C
Stability:	≥4 years



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

Laboratory Procedures

Norfloxacin is supplied as a crystalline solid. A stock solution may be made by dissolving the norfloxacin in the solvent of choice. Norfloxacin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of norfloxacin 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 norfloxacin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of norfloxacin 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

Norfloxacin is a fluoroquinolone antibiotic that inhibits the growth of Gram-positive and Gram-negative bacteria (MICs = 4 and 1 µg/ml for *S. aureus* and *P. aeruginosa*, respectively).[1] It also inhibits the growth *S. pseudintermedius*, *S. aureus*, *E. coli*, *Pasturella*, and *S. canis* isolates from dogs (mean MIC_{50}s = 0.25, 1, 0.03, 1, and 1 µg/ml, respectively).[2] Topical administration of norfloxacin (0.1% v/v) reduces corneal ulcer size in a rabbit model of *P. aeruginosa* corneal infection. It also prevents encrusted cystitis in bladder and increases survival in a rat model of *Corynebacterium* group D2 infection when administered at a dose of 80 mg/kg per day.[3] Formulations containing norfloxacin have been used to treat urinary tract and gynecological infections.

References

1. Darrell, R.W., Modak, S.M., and Fox, C.L., Jr. Norfloxacin and silver norfloxacin in the treatment of *Pseudomonas* corneal ulcer in the rabbit. *Trans. Am. Opthalmol. Soc.* **82**, 75-91 (1984).
2. Awji, E.G., Damte, D., Lee, S.-J., *et al.* The *in vitro* activity of 15 antimicrobial agents against bacterial isolates from dogs. *J. Vet. Med. Sci.* **74(8)**, 1091-1094 (2012).
3. Soriano, F., Rodriguez-Tudela, J.L., Castilla, C., *et al.* Treatment of encrusted cystitis caused by *Corynebacterium* group D2 with norfloxacin, ciprofloxacin, and teicoplanin in an experimental model in rats. *Antimicrob. Agents Chemother.* **35(12)**, 2587-2590 (1991).

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