

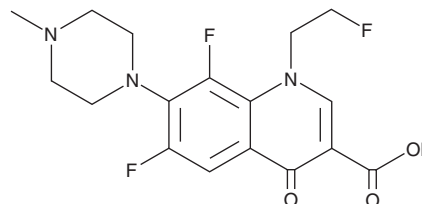
# PRODUCT INFORMATION



## Fleroxacin

Item No. 24173

**CAS Registry No.:** 79660-72-3  
**Formal Name:** 6,8-difluoro-1-(2-fluoroethyl)-1,4-dihydro-7-(4-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid  
**Synonyms:** AM833, Ro 23-6240  
**MF:** C<sub>17</sub>H<sub>18</sub>F<sub>3</sub>N<sub>3</sub>O<sub>3</sub>  
**FW:** 369.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 210, 291 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

Fleroxacin is supplied as a crystalline solid. A stock solution may be made by dissolving the fleroxacin in the solvent of choice, which should be purged with an inert gas. Fleroxacin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of fleroxacin in these solvents is approximately 15 and 0.1 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 fleroxacin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of fleroxacin in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Fleroxacin is a broad-spectrum fluoroquinolone antibiotic.<sup>1</sup> It is active against a variety of Gram-positive and Gram-negative bacteria with MIC<sub>90</sub> values ranging from 0.05 to 3.13 µg/ml for clinical isolates of *Staphylococcus*, *P. aeruginosa*, *H. influenzae*, *N. gonorrhoeae*, *B. catarrhalis*, *C. jejuni*, and various species of *Enterobacteriaceae*. Fleroxacin inhibits bacterial DNA replication with IC<sub>50</sub> values of 82.6 and 31.6 µg/ml for *S. aureus* DNA gyrase and topoisomerase IV, respectively.<sup>2</sup> Fleroxacin is active *in vivo* with ED<sub>50</sub> values ranging from 0.8 to 16.6 mg/kg in mice with systemic bacterial infections.<sup>1</sup> It also reduces *E. coli* in the kidney in a mouse model of urinary tract infection when administered at doses of 0.625 and 10 mg/kg twice daily. Formulations containing fleroxacin have been used in the treatment of uncomplicated cystitis, gonorrhea, bacterial enteritis, traveler's diarrhea, and urinary tract infections.<sup>3</sup>

### References

1. Hirai, K., Aoyama, H., Hosaka, M., *et al.* In vitro and in vivo antibacterial activity of AM-833, a new quinolone derivative. *Antimicrob. Agents Chemother.* **29(6)**, 1059-1066 (1986).
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. Naber, K.G. Fleroxacin overview. *Chemotherapy* **42(Suppl 1)**, 1-9 (1996).

#### 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.

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