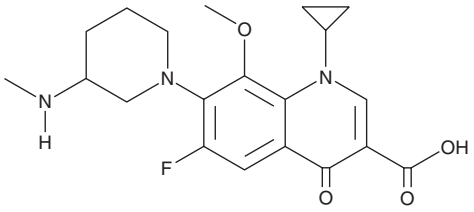
PRODUCT INFORMATION

Balofloxacin

Item No. 25504

CAS Registry No.:	127294-70-6
Formal Name:	1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-[3-(methylamino)-1-piperidinyl]-4-oxo-3-quinolinecarboxylic acid
Synonym:	Q-35
MF:	$C_{20}H_{24}FN_3O_4$
FW:	389.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 214, 294 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

Balofloxacin is supplied as a crystalline solid. A stock solution may be made by dissolving the balofloxacin in the solvent of choice, which should be purged with an inert gas. Balofloxacin is soluble in organic solvents such as DMSO (with warming) and dimethyl formamide (DMF). The solubility of balofloxacin in these solvents is approximately 1 and 10 mg/ml, respectively.

Balofloxacin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, balofloxacin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Balofloxacin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Balofloxacin is a fluoroquinolone antibiotic.[1] It is active against clinical isolates of a variety of Gram-positive and Gram-negative bacteria *in vitro*, including *K. pneumoniae*, *H. influenzae*, *N. gonorrhoeae*, *P. mirabilis*, *S. pyogenes*, and methicillin-resistant *S. aureus* (MRSA; MIC_{50}s = 0.025-0.78 µg/ml). Balofloxacin inhibits DNA gyrase from *E. coli*, *P. aeruginosa*, and *S. aureus* (IC_{50}s = 0.47, 11, and 2.5 µg/ml, respectively, in a DNA supercoiling assay). It reduces mortality in mouse models of systemic *S. aureus*, MRSA, *S. pneumoniae*, *K. pneumoniae*, and *P. aeruginosa* infection (ED_{50}s = 5, 20, 10, 160, and 50.4 mg/kg, respectively).[2]

References

1. Ito, T., Otsuki, M., and Nishino, T. In vitro antibacterial activity of Q-35, a new fluoroquinolone. *Antimicrob. Agents Chemother.* **36(8)**, 1708-1714 (1992).
2. Iwasaki, H., Miyazaki, S., Tsuji, A., *et al*. In vitro and in vivo antibacterial activities of Q-35, a novel fluoroquinolone. *Chemotherapy* **41(2)**, 100-112 (1995).

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