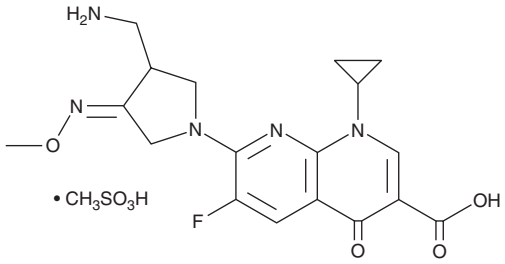
PRODUCT INFORMATION

Gemifloxacin (mesylate)

Item No. 21047

CAS Registry No.: 210353-53-0
Formal Name: 7-[(4Z)-3-(aminomethyl)-4-(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-1,8-naphthyridine-3-carboxylic acid, monomethanesulfonate
Synonyms: LB 20304a, SB 265805S
MF: $C_{18}H_{20}FN_5O_4 \bullet CH_3SO_3H$
FW: 485.5
Purity: ≥98%
UV/Vis.: λ_{max}: 269, 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

Gemifloxacin (mesylate) is supplied as a crystalline solid. A stock solution may be made by dissolving the gemifloxacin (mesylate) in the solvent of choice. Gemifloxacin (mesylate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of gemifloxacin (mesylate) in these solvents is approximately 15 and 10 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 gemifloxacin (mesylate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of gemifloxacin (mesylate) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gemifloxacin is a fluoroquinolone antibiotic that is effective against *C. pneumoniae* and *M. tuberculosis* (MIC_{50}s = 0.25 and 8 µg/ml, respectively).[1,2] Quinolones, including gemifloxacin, inhibit bacterial DNA gyrase and other topoisomerases.[3,4] Formulations containing gemifloxacin are useful against respiratory tract infections, particularly community-acquired pneumonia and tuberculosis.[1,5,6]

References

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3. Collin, F., Karkare, S., and Maxwell, A. *Appl. Microbiol. Biotechnol.* **92(3)**, 479-497 (2011).
4. Weigel, L.M., Anderson, G.J., and Tenover, F.C. *Antimicrob. Agents Chemother.* **46(8)**, 2582-2587 (2002).
5. Grossman, R.F., Hsueh, P.-R., Gillespie, S.H., *et al. Int. J. Infect. Dis.* **18**, 14-21 (2014).
6. Pranger, A.D., Alffenaar, J.W.C., and Aarnoutse, R.E. *Curr. Pharm. Des.* **17(27)**, 29002-29930 (2011).

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