

# PRODUCT INFORMATION

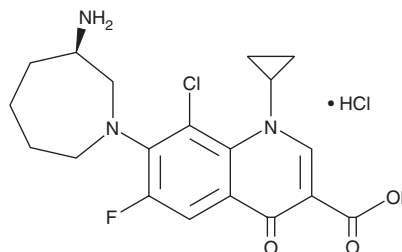


## Besifloxacin (hydrochloride)

Item No. 23692

**CAS Registry No.:** 405165-61-9  
**Formal Name:** 7-[(3R)-3-aminoheptahydro-1H-azepin-1-yl]-8-chloro-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid, monohydrochloride

**Synonym:** BOL-303224-A  
**MF:** C<sub>19</sub>H<sub>21</sub>ClFN<sub>3</sub>O<sub>3</sub> • HCl  
**FW:** 430.3  
**Purity:** ≥95%  
**Supplied as:** A 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

Besifloxacin (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the besifloxacin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Besifloxacin (hydrochloride) is slightly soluble in the methanol.

Besifloxacin (hydrochloride) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Besifloxacin is an ophthalmologic fluoroquinolone antibiotic that is active against Gram-negative and Gram-positive aerobic and anaerobic bacterial strains (MICs = 0.006-1.56 µg/ml).<sup>1</sup> It inhibits LPS-stimulated production of the inflammatory cytokines IL-1β, IL-8, IL-6, and IL-1α in human THP-1 monocytes.<sup>2</sup> Besifloxacin, when 2 drops of a 0.6% solution are applied per eye, yields a concentration of 2 µg/g which is greater than the MIC<sub>90</sub>s of ophthalmologic isolates of *H. influenzae*, *S. pneumoniae*, *S. aureus*, and *Corynebacterium* and reduces the number of bacteria found in the aqueous, but not vitreous, humor in a rabbit model of bacterial endophthalmitis.<sup>1,3</sup>

### References

1. Ward, K.W., Lepage, J.F., and Driot, J.Y. Nonclinical pharmacodynamics, pharmacokinetics, and safety of BOL-303224-A, a novel fluoroquinolone antimicrobial agent for topical ophthalmic use. *J. Ocul. Pharmacol. Ther.* **23**(3), 243-256 (2007).
2. Zhang, J.-Z. and Ward, K.W. Besifloxacin, a novel fluoroquinolone antimicrobial agent, exhibits potent inhibition of pro-inflammatory cytokines in human THP-1 monocytes. *J. Antimicrob. Chemother.* **61**(1), 111-116 (2008).
3. Norcross, E.W., Sanders, M.E., Moore, Q., III, et al. Comparative efficacy of besifloxacin and other fluoroquinolones in a prophylaxis model of penicillin-resistant *Streptococcus pneumoniae* rabbit endophthalmitis. *J. Ocul. Pharmacol. Ther.* **26**(3), 237-243 (2010).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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