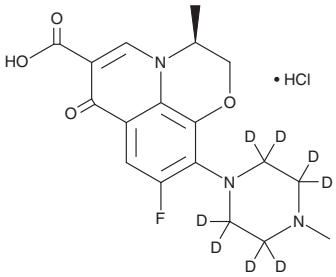
# PRODUCT INFORMATION

## Levofloxacin-$d_8$ (hydrochloride)

*Item No. 29080*

**CAS Registry No.:** 2699607-50-4
**Formal Name:** (3S)-9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl-2,2,3,3,5,5,6,6-$d_8$)-7-oxo-7H-pyrido[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, monohydrochloride
**MF:** $C_{18}H_{12}D_8FN_3O_4 \bullet HCl$
**FW:** 405.9
**Chemical Purity:** ≥98% (Levofloxacin)
**Deuterium Incorporation:** ≥99% deuterated forms ($d_1$-$d_8$); ≤1% $d_0$
**Supplied as:** A 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

Levofloxacin-$d_8$ (hydrochloride) is intended for use as an internal standard for the quantification of levofloxacin (Item No. 20382) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Levofloxacin-$d_8$ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the levofloxacin-$d_8$ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Levofloxacin-$d_8$ (hydrochloride) is soluble in DMSO.

### Description

Levofloxacin is a fluoroquinolone antibiotic and the active stereoisomer of ofloxacin (Item No. 22891).[1] It is active against *S. aureus*, *S. epidermidis*, *B. subtilis*, *E. coli*, *P. aeruginosa*, and *K. pneumoniae* (MICs = 0.25, 0.25, 0.5, 0.03, 4, and 0.25 µg/ml, respectively).[2] Levofloxacin inhibits *S. aureus* DNA gyrase and topoisomerase IV ($IC_{50}$s = 8.06 and 9.81 µg/ml, respectively).[3] It eliminates infection in rat models of endocarditis caused by methicillin-sensitive or -resistant *S. aureus*.[4] Formulations containing levofloxacin have been used in the treatment of various bacterial infections.

### References


1. Norrby, S.R. Levofloxacin. *Expert Opin. Pharmacother.* **1(1),** 109-119 (1999).
2. Mohammadhosseini, N., Alipanahi, Z., Alipour, E., *et al.* Synthesis and antibacterial activity of novel levofloxacin derivatives containing a substituted thienylethyl moiety. *Daru.* **20(1),** (2012).
3. 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).
4. Entenza, J.M., Vouillamoz, J., Glauser, M.P., *et al.* Levofloxacin versus ciprofloxacin, flucloxacillin, or vancomycin for treatment of experimental endocarditis due to methicillin-susceptible or -resistant *Staphylococcus aureus*. *Antimicrob. Agents Chemother.* **41(8),** 1662-1667 (1997).





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