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Produktinformation

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siehe unsere Liefer- und Versandbedingungen

Zuschläge

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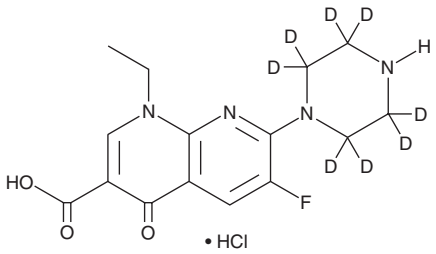
PRODUCT INFORMATION

Enoxacin-d_8 (hydrochloride)

Item No. 33544

Formal Name:	1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl-2,2,3,3,5,5,6,6-d_8)-1,8-naphthyridine-3-carboxylic acid, monohydrochloride
MF:	$C_{15}H_9D_8FN_4O_3$ • HCl
FW:	364.8
Chemical Purity:	≥98% (Enoxacin)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_8); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Enoxacin-d_8 is intended for use as an internal standard for the quantification of enoxacin (Item No. 16956) 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).

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

Description

Enoxacin is a fluoroquinolone antibiotic.[1-4] It is active against clinical isolates of a variety of Gram-positive and Gram-negative bacteria, including *S. aureus*, *E. coli*, *K. pneumoniae*, *P. aeruginosa*, and *S. marcescens* (MIC_{50}s = 1, 0.12, 0.25, 0.5, and 1 mg/L, respectively).[1] Enoxacin inhibits *S. aureus* DNA gyrase supercoiling activity and topoisomerase IV DNA decatenation (IC_{50}s = 126 and 26.5 µg/ml, respectively).[2] It increases survival in mouse models of systemic *S. aureus*, *E. coli*, *K. pneumoniae*, *P. aeruginosa*, and *S. marcescens* infection with ED_{50} values of 15.1, 2.2, 4.1, 120.3, and 7.6 mg/kg, respectively.[3] Enoxacin (4 and 8 mg/kg per day) also reduces tumor growth in a 143B human osteosarcoma mouse xenograft model.[4] Formulations containing enoxacin have previously been used in the treatment of urinary tract infections and gonorrhea.

References

1. Clarke, A.M., Zemcov, S.J., and Campbell, M.E. *In-vitro* activity of pefloxacin compared to enoxacin, norfloxacin, gentamicin and new β-lactams. *J. Antimicrob. Chemother.* **15(1)**, 39-44 (1985).
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. Ozaki, M., Matsuda, M., Tomii, Y., *et al.* In vivo evaluation of NM441, a new thiazeto-quinoline derivative. *Antimicrob. Agents Chemother.* **35(12)**, 2496-2499 (1991).
4. Luo, X., Liu, X., Tao, Q., *et al.* Enoxacin inhibits proliferation and invasion of human osteosarcoma cells and reduces bone tumour volume in a murine xenograft model. *Oncol. Lett.* **20(2)**, 1400-1408 (2020).

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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