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Zuschläge

- Mindermengenzuschlag
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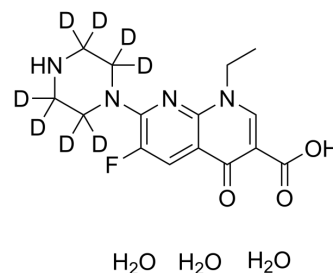
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Enoxacin-d₈ hydrate

Cat. No.:	HY-B0268S2
Molecular Formula:	C ₁₅ H ₁₅ D ₈ FN ₄ O ₆
Molecular Weight:	382.41
Target:	Isotope-Labeled Compounds; Antibiotic; MicroRNA; DNA/RNA Synthesis; Bacterial
Pathway:	Others; Anti-infection; Epigenetics; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Enoxacin-d₈ (hydrate) is deuterium labeled Enoxacin. Enoxacin (AT 2266), a fluoroquinolone, interferes with DNA replication and inhibits bacterial DNA gyrase (IC₅₀=126 µg/ml) and topoisomerase IV (IC₅₀=26.5 µg/ml). Enoxacin is a miRNA processing activator and enhances siRNA-mediated mRNA degradation and promotes the biogenesis of endogenous miRNAs. Enoxacin has potent activities against gram-positive and -negative bacteria. Enoxacin is a cancer-specific growth inhibitor that acts by enhancing TAR RNA-binding protein 2 (TRBP)-mediated microRNA processing^{[1][2][3][4][5]}.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Chin, N.-X. and H.C. Neu, In vitro activity of enoxacin, a quinolone carboxylic acid, compared with those of norfloxacin, new beta-lactams, aminoglycosides, and trimethoprim. *Antimicrobial agents and chemotherapy*, 1983. 24(5): p. 754-763.
- [3]. Sonia Melo, et al. Small molecule enoxacin is a cancer-specific growth inhibitor that acts by enhancing TAR RNA-binding protein 2-mediated microRNA processing. *Proc Natl Acad Sci U S A*. 2011 Mar 15;108(11):4394-9.
- [4]. Ge Shan, et al. A small molecule enhances RNA interference and promotes microRNA processing. *Nat Biotechnol*. 2008 Aug;26(8):933-40.
- [5]. Rengen Fan, et al. Small molecules with big roles in microRNA chemical biology and microRNA-targeted therapeutics. *RNA Biol*. 2019 Jun;16(6):707-718.
- [6]. M Takei, et al. Target preference of 15 quinolones against *Staphylococcus aureus*, based on antibacterial activities and target inhibition. *Antimicrob Agents Chemother*. 2001 Dec;45(12):3544-7.

Caution: Product has not been fully validated for medical applications. For research use only.

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