

PRODUCT INFORMATION



Ozenoxacin

Item No. 41837

CAS Registry No.: 245765-41-7

Formal Name: 1-cyclopropyl-1,4-dihydro-8-methyl-7-[5-methyl-6-(methylamino)-3-pyridinyl]-4-oxo-3-quinolinecarboxylic acid

Synonym: T-3912

MF: $C_{21}H_{21}N_3O_3$

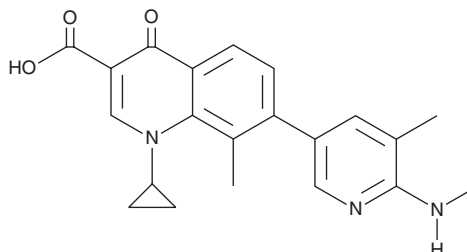
FW: 363.4

Purity: $\geq 98\%$

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

Ozenoxacin is supplied as a solid. A stock solution may be made by dissolving the ozenoxacin in the solvent of choice, which should be purged with an inert gas. Ozenoxacin is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

Ozenoxacin is a quinolone antibiotic.¹ It is active against clinical isolates of *S. pyogenes*, *P. aeruginosa*, and *P. acnes* and clinical isolates of antibiotic-sensitive and -resistant *S. aureus*, *S. epidermidis*, and *S. pneumoniae* ($\text{MIC}_{50}\text{s} = 0.00625\text{-}1.56$ mg/L). Ozenoxacin inhibits *S. aureus* DNA gyrase and topoisomerase IV ($\text{IC}_{50}\text{s} = 4.5$ and 0.617 mg/L, respectively). It reduces insulin- or 5α -dihydroxy testosterone-induced triglyceride production and lipid droplet formation in primary hamster sebocytes when used at a concentration of $30\text{ }\mu\text{M}$.² Ozenoxacin ($30\text{ }\mu\text{g/ml}$) decreases heat-killed *C. acnes*-induced increases in IL-6 and IL-8 production in HEKa primary human keratinocytes and IL-1 β , IL-6, IL-8, and TNF- α production in THP-1 monocytes.³ Topical application of ozenoxacin (1%) decreases skin lesion bacterial counts in a mouse model of burn infection caused by *S. aureus*.¹ Formulations containing ozenoxacin have been used in the treatment of *S. aureus*- or *S. pyogenes*-associated impetigo.

References

1. Yamakawa, T., Mitsuyama, J., and Hayashi, K. *In vitro* and *in vivo* antibacterial activity of T-3912, a novel non-fluorinated topical quinolone. *J. Antimicrob. Chemother.* **49**(3), 455-465 (2002).
2. Kitano, T., Koiwai, T., Fujikawa, K., et al. Ozenoxacin suppresses sebum production by inhibiting mTORC1 activation in differentiated hamster sebocytes. *J. Dermatol.* **51**(9), 1187-1198 (2024).
3. Tabara, K., Tamura, R., Nakamura, A., et al. Anti-inflammatory effects of ozenoxacin, a topical quinolone antimicrobial agent. *J. Antibiot. (Tokyo)* **73**(4), 247-254 (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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