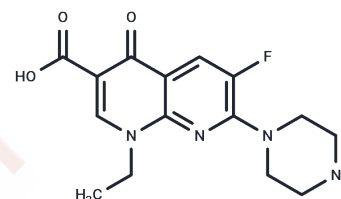


## Enoxacin

## Chemical Properties

CAS No. :	74011-58-8
Formula:	C <sub>15</sub> H <sub>17</sub> FN <sub>4</sub> O <sub>3</sub>
Molecular Weight:	320.32
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Enoxacin (NSC-629661) is a broad-spectrum 6-fluoronaphthyridinone antibacterial agent (fluoroquinolones) structurally related to nalidixic acid.
Targets(IC50)	Antibacterial, Antibiotic, DNA/RNA Synthesis, Topoisomerase, MicroRNA
In vitro	Enoxacin, a fluoroquinolone used as an antibacterial compound, enhances the production of miRNAs with tumor suppressor functions by binding to the miRNA biosynthesis protein TAR RNA-binding protein 2 (TRBP). [1] Enoxacin binds to the DNA active site and alters the breakage/reunion activity of the enzyme. Enoxacin stimulates cleavage of both relaxed and supercoiled forms of DNA in the absence of ATP, whereas CcdB induces cleavage only after many cycles of ATP-dependent breakage and reunion. [2] Enoxacin dose dependently reduces the number of osteoclasts differentiating in mouse marrow cultures stimulated with 1,25-dihydroxyvitamin D(3), as well as markers of osteoclast activity, and the number of resorption lacunae formed on bone slices. Enoxacin inhibits osteoclast formation at concentrations where osteoblast formation is not altered. [3] Enoxacin dose-dependently reduces the number of multinuclear cells expressing tartrate-resistant acid phosphatase (TRAP) activity produced by RANK-L-stimulated osteoclast precursors. Enoxacin directly inhibits osteoclast formation without affecting cell viability by a novel mechanism that involves changes in posttranslational processing and trafficking of several proteins with known roles in osteoclast function. [4] Enoxacin is able to decrease cell viability, induce apoptosis, cause cell cycle arrest, and inhibit the invasiveness of prostate cancer (PCa) cell lines. Enoxacin is also effective in restoring the global expression of miRNAs in prostate cancer (PCa) cell lines. [5]

## Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 2.3 mg/mL (7.18 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.23 mg/mL (0.72 mM), Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.1219 mL	15.6094 mL	31.2188 mL
5 mM	0.6244 mL	3.1219 mL	6.2438 mL
10 mM	0.3122 mL	1.5609 mL	3.1219 mL
50 mM	0.0624 mL	0.3122 mL	0.6244 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

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