# Cinoxacin

**Cat. No.:** HY-B1085

**CAS No.:** 28657-80-9

**Molecular Formula:** $C_{12}H_{10}N_2O_5$

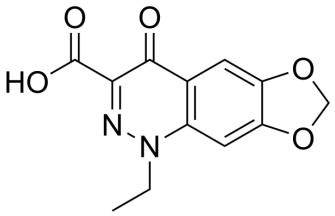
**Molecular Weight:** 262.22

**Target:** Bacterial; Antibiotic; DNA/RNA Synthesis

**Pathway:** Anti-infection; Cell Cycle/DNA Damage

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 8.33 mg/mL (31.77 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.8136 mL | 19.0680 mL | 38.1359 mL |
| | 5 mM | 0.7627 mL | 3.8136 mL | 7.6272 mL |
| | 10 mM | 0.3814 mL | 1.9068 mL | 3.8136 mL |

Please refer to the solubility information to select the appropriate solvent.

## BIOLOGICAL ACTIVITY

**Description**

Cinoxacin (Compound 64716), a synthetic antimicrobial related to the quinolone class of orally active antibacterial agent. Cinoxacin has antibacterial activity against many gram-negative aerobic bacteria and inhibits bacterial DNA synthesis. Cinoxacin can be used for the research of urinary tract infections and bacterial prostatitis[1][2].

**$IC_{50}$ & Target**

Quinolone

**In Vitro**

Cinoxacin (0-200μg/mL approximately, 3-24 h) inhibits many gram-negative aerobic bacteria with MIC values ranging from 4 to 64 μg/mL[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

| | |
|---|---|
| Cell Line: | Gram-negative aerobic bacteria (Escherichia coli, Proteus sp. etc.) |
| Concentration: | 0-200μg/mL approximately |

| | |
|---|---|
| Incubation Time: | 3-24 h |
| Result: | Inhibited basal cell proliferation (40% in FB-2 and 35% in WRO) at 10 μM, inhibited cell number (by 68% to 73%) at 40 and 60 μM). |

**In Vivo**

Cinoxacin (Oral administration, 1.7 g/kg, treated at 1 and 5 h postinfection) is effective in experimental bacterial infections in mice, with $ED_{50}$ values ranging from 8.1 to 58.6 mg/kg[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Indicated bacterial infected mice model[2] |
| Dosage: | 1.7 g/kg, treated at 1 and 5 h postinfection |
| Administration: | Oral administration |
| Result: | Displayed antibacterial activity with $ED_{50}$ values ranging from 8.1 to 58.6 mg/kg. |

## CUSTOMER VALIDATION

- J Chem Inf Model. 2021 Jul 21.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Scavone JM, et al. Cinoxacin: mechanism of action, spectrum of activity, pharmacokinetics, adverse reactions, and therapeutic indications. Pharmacotherapy. 1982 Sep-Oct;2(5):266-72.

[2]. W E Wick, et al. Compound 64716, a new synthetic antibacterial agent. Antimicrob Agents Chemother. 1973 Oct;4(4):415-20.



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