Dicloxacillin sodium

Cat. No.: HY-B1459

CAS No.: 343-55-5

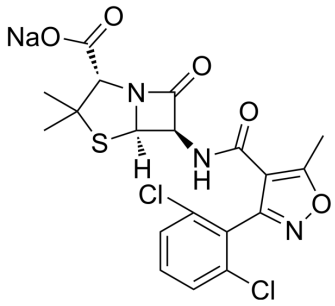
Molecular Formula: $C_{19}H_{16}Cl_2N_3NaO_5S$

Molecular Weight: 492.31

Target: Bacterial; Antibiotic; Beta-lactamase

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Dicloxacillin sodium is a β-lactam antibiotic of the penicillin family. Dicloxacillin sodium against Gram-positive bacteria. Dicloxacillin sodium is active against β-lactamase-producing organisms such as Staphylococcus aureus[1].
IC_{50} & Target	β-lactam
In Vitro	Dicloxacillin exhibits EC_{50} values of 0.06 and 0.50 mg/L in ATCC 25923 and E19977, respectively. Dicloxacillin exhibits MIC values of 0.125 and 0.5 mg/L in ATCC 25923 and E19977 with pH 7.4, respectively[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Dicloxacillin exhibits therapeutic activity in murine peritonitis-sepsis model and all the mice are survivied[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female outbred Swiss Webster mice (Murine peritonitis-sepsis model)[3].
Dosage:	125 mg/kg.
Administration:	IV injection, single doses.
Result:	All the mice survived.

CUSTOMER VALIDATION

- bioRxiv. 2024 May 10.
- Biomed Res Int. 2018 Jul 2;2018:3579832.

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REFERENCES

[1]. Anne Sandberg, et al. Intra- and extracellular activities of dicloxacillin against Staphylococcus aureus in vivo and in vitro. Antimicrob Agents Chemother. 2010

Jun;54(6):2391-400.

[2]. John Chu, et al. Discovery of MRSA active antibiotics using primary sequence from the human microbiome. Nat Chem Biol. 2016 Dec;12(12):1004-1006.

[3]. Miranda-Novales G, et al. In vitro activity effects of combinations of cephalothin, dicloxacillin, imipenem, vancomycin and amikacin against methicillin-resistant Staphylococcus spp. strains. Ann Clin Microbiol Antimicrob. 2006 Oct 12;5:25.

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