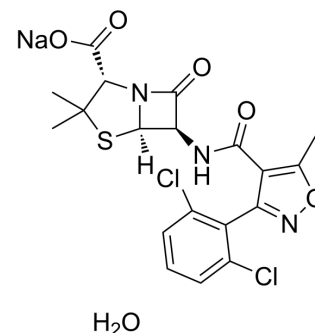


Dicloxacillin Sodium hydrate

Cat. No.:	HY-B0977
CAS No.:	13412-64-1
Molecular Formula:	C ₁₉ H ₁₈ Cl ₂ N ₃ NaO ₆ S
Molecular Weight:	510.32
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 25 mg/mL (48.99 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	1.9596 mL	9.7978 mL	19.5955 mL
				5 mM	0.3919 mL	1.9596 mL	3.9191 mL
				10 mM	0.1960 mL	0.9798 mL	1.9596 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: PBS Solubility: 25 mg/mL (48.99 mM); Clear solution; Need ultrasonic						

BIOLOGICAL ACTIVITY

Description	Dicloxacillin Sodium hydrate (Dicloxacillin sodium salt monohydrate) is a narrow-spectrum β-Lactam antibiotic of the penicillin class, is used to treat infections caused by susceptible Gram-positive bacteria, active against beta-lactamase-producing organisms such as <i>Staphylococcus aureus</i> ^{[1][2][3]} .	
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 ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[3]	
	Cell Line:	Strains ATCC 25923 and E19977.

	Concentration:	0-500 mg/L.
	Incubation Time:	Up to 24 h.
	Result:	Exhibited EC ₅₀ values of 0.06 and 0.50 mg/L in ATCC 25923 and E19977, respectively.
In Vivo	Dicloxacillin exhibits therapeutic activity in murine peritonitis-sepsis model and all the mice are survived ^[4] . 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) ^[4] .
	Dosage:	125 mg/kg.
	Administration:	IV injection, single doses.
	Result:	All the mice survived.

CUSTOMER VALIDATION

- Biomed Res Int. 2018 Jul 2;2018:3579832.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Jusko WJ, et al. Enhanced renal excretion of dicloxacillin in patients with cystic fibrosis. *Pediatrics*. 1975 Dec;56(6):1038-44.
- [2]. 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.
- [3]. 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.
- [4]. 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.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA