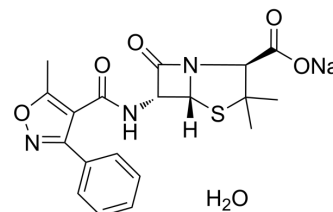


## Oxacillin sodium monohydrate

Cat. No.:	HY-B0465
CAS No.:	7240-38-2
Molecular Formula:	C <sub>19</sub> H <sub>20</sub> N <sub>3</sub> NaO <sub>6</sub> S
Molecular Weight:	441
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<sub>2</sub>O : ≥ 100 mg/mL (226.76 mM)

DMSO : 50 mg/mL (113.38 mM; Need ultrasonic)

\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	<div>Solvent</div> <div>Concentration</div>	Mass	1 mg	5 mg	10 mg
	1 mM		2.2676 mL	11.3379 mL	22.6757 mL
	5 mM		0.4535 mL	2.2676 mL	4.5351 mL
	10 mM		0.2268 mL	1.1338 mL	2.2676 mL
	Please refer to the solubility information to select the appropriate solvent.				

In Vivo

1. Add each solvent one by one: PBS

Solubility: 110 mg/mL (249.43 mM); Clear solution; Need ultrasonic

2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline

Solubility: ≥ 2.5 mg/mL (5.67 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil

Solubility: ≥ 2.5 mg/mL (5.67 mM); Clear solution

### BIOLOGICAL ACTIVITY

Description	Oxacillin sodium monohydrate is an antibiotic similar to Flucloxacillin used in resistant staphylococci infections study <sup>[1]</sup> .
In Vitro	<p>Oxacillin exhibits MIC values of ≤1 µg/mL for four mecA gene-carrying <i>S. aureus</i> clinical isolates (SA 1306, SA 1326, SA 1552, and SA 4666<sup>[1]</sup>).</p> <p>Oxacillin (5 µg/mL, 0-90 min) induces lysis of Tol<sup>+</sup> and Tol<sup>-</sup> strains<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[2]</sup></p>

Cell Line:	Cells of <i>S. aureus</i> which had grown for six to eight generations in [ <sup>14</sup> C]glycerol.
Concentration:	5 µg/mL.
Incubation Time:	0, 30, 60, 90 min.
Result:	The Tol <sup>+</sup> isolates were readily distinguished from Tol <sup>-</sup> isolates by the rates at which the cells lysed.

## CUSTOMER VALIDATION

- iScience. 5 January 2022, 103731.
- Front Microbiol. 2020 Jul 31;11:1720.
- Microorganisms. 2024 Jan 25, 12(2), 256.
- BMC Microbiol. 2023 Apr 20;23(1):109.
- ACS Omega. March 3, 2022.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Alexandros Ikonomidis, et al. In vitro and in vivo evaluations of oxacillin efficiency against mecA-positive oxacillin-susceptible *Staphylococcus aureus*. Antimicrob Agents Chemother. 2008 Nov;52(11):3905-8.
- [2]. R H Raynor, et al. Oxacillin-induced lysis of *Staphylococcus aureus*. Antimicrob Agents Chemother. 1979 Aug;16(2):134-40.

**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](mailto:tech@MedChemExpress.com)

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