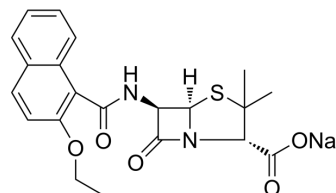


Nafcillin sodium

Cat. No.:	HY-B0555B
CAS No.:	985-16-0
Molecular Formula:	C ₂₁ H ₂₁ N ₂ NaO ₅ S
Molecular Weight:	436.46
Target:	Antibiotic; Bacterial; Beta-lactamase
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nafcillin sodium, an antibiotic, is a reversible inhibitor of β -lactamase. Nafcillin sodium can be used for the research of staphylococcal infections ^{[1][2]} .								
IC₅₀ & Target	β -lactam								
In Vivo	<p>Nafcillin sodium (100 mg/kg; s.c.) exhibits bactericidal activity against methicillin-susceptible <i>Staphylococcus aureus</i> (MSSA) and methicillin-resistant <i>S. aureus</i> (MRSA), with MICs of 0.5 μg/mL and 64.0 μg/mL for <i>S. aureus</i> strains Xen-29 and Xen-1, respectively, in mice^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>CD-1 female mice (20-25 g), with MRSA- and MSSA-infected^[3]</td> </tr> <tr> <td>Dosage:</td> <td>100 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Subcutaneous injection</td> </tr> <tr> <td>Result:</td> <td>Protected 100% of the healthy mice with MSSA infections.</td> </tr> </table>	Animal Model:	CD-1 female mice (20-25 g), with MRSA- and MSSA-infected ^[3]	Dosage:	100 mg/kg	Administration:	Subcutaneous injection	Result:	Protected 100% of the healthy mice with MSSA infections.
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CUSTOMER VALIDATION

- J Mol Liq. 29 October 2021, 117946.
- Biomed Res Int. 2018 Jul 2;2018:3579832.

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REFERENCES

- [1]. Tan AK, et, al. Identification of the site of covalent attachment of nafcillin, a reversible suicide inhibitor of beta-lactamase. *Biochem J.* 1992 Jan 1;281 (Pt 1)(Pt 1):191-6.
- [2]. Palmer DL, et, al. Bacterial wound colonization after broad-spectrum versus narrow-spectrum antibiotics. *Ann Thorac Surg.* 1995 Mar;59(3):626-31.

[3]. Lawrence I. Mortin, et al. Rapid Bactericidal Activity of Daptomycin against Methicillin-Resistant and Methicillin-Susceptible Staphylococcus aureus Peritonitis in Mice as Measured with Bioluminescent Bacteria. Antimicrob Agents Chemother. 2007 May; 51(5): 1787-1794.

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

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