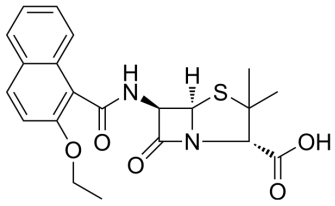
Nafcillin

Cat. No.:	HY-B0555
CAS No.:	147-52-4
Molecular Formula:	$C_{21}H_{22}N_2O_5S$
Molecular Weight:	414.47
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, an antibiotic, is a reversible inhibitor of β-lactamase. Nafcillin exhibits bactericidal activity, and can be used for the research of staphylococcal infections[1][2][3][4].
IC_{50} & Target	β-lactam
In Vivo	Nafcillin (100 mg/kg; s.c.) exhibits bactericidal activity against methicillin-susceptible Staphylococcus aureus (MSSA) and methicillin-resistant S. aureus (MRSA), with MICs of 0.5 μg/mL and 64.0 μg/mL for S. aureus strains Xen-29 and Xen-1, respectively, in mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

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

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REFERENCES

[1]. Tan, A.K., et al. Identification of the site of covalent attachment of nafcillin, a reversible suicide inhibitor of beta-lactamase. Biochem J, 1992. 281 (Pt 1): p. 191-6.

[2]. Palmer, D.L., et al. Bacterial wound colonization after broad-spectrum versus narrow-spectrum antibiotics. Ann Thorac Surg, 1995. 59(3): p. 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.

[4]. Sakoulas G, et al. Nafcillin enhances innate immune-mediated killing of methicillin-resistant Staphylococcus aureus. J Mol Med (Berl). 2014 Feb;92(2):139-49.

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