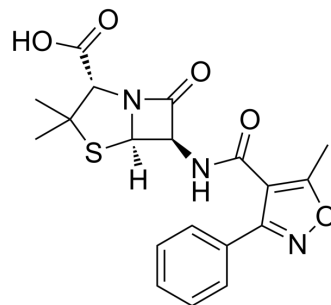


Oxacillin

Cat. No.:	HY-B0925A
CAS No.:	66-79-5
Molecular Formula:	C ₁₉ H ₁₉ N ₃ O ₅ S
Molecular Weight:	401.44
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Oxacillin is an orally active synthetic penicillin with good bactericidal activity against staphylococci and other gram-positive pathogens ^[1] .								
IC₅₀ & Target	β-lactam								
In Vitro	Oxacillin inhibits gram positive pathogens with MICs of 0.05, 0.09, 0.32 and 0.80 μg/mL against group A streptococci, Pneumococci, susceptible staphylococci and penicillin-resistant staphylococci, respectively ^[1] . The Oxacillin-resistant strains are highly resistant to other penicillins ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	Oxacillin (50-800 mg/kg; s.c.; once) shows curative dose (CD ₅₀) of 253.3 mg/kg in mice infected with Staphylococcus aureus Evans. The oral CD ₅₀ of Oxacillin is 187.2 mg/kg ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
	<table> <tr> <td>Animal Model:</td> <td>CD-1 strain male albino mice infected with S. aureus Evans^[2]</td> </tr> <tr> <td>Dosage:</td> <td>50, 100, 200, 400 and 800 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Subcutaneous injection, once</td> </tr> <tr> <td>Result:</td> <td>Showed therapeutic activity with CD₅₀ of 253.3 mg/kg.</td> </tr> </table>	Animal Model:	CD-1 strain male albino mice infected with S. aureus Evans ^[2]	Dosage:	50, 100, 200, 400 and 800 mg/kg	Administration:	Subcutaneous injection, once	Result:	Showed therapeutic activity with CD ₅₀ of 253.3 mg/kg.
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Result:	Showed therapeutic activity with CD ₅₀ of 253.3 mg/kg.								

CUSTOMER VALIDATION

- iScience. 5 January 2022, 103731.
- Front Microbiol. 2020 Jul 31;11:1720.
- BMC Microbiol. 2023 Apr 20;23(1):109.
- ACS Omega. March 3, 2022.
- Microbiol Spectr. 2022 Mar 2;e0054121.

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REFERENCES

- [1]. KIRBY WM, et al. Oxacillin: laboratory and clinical evaluation. JAMA. 1962 Sep 1;181:739-44.
- [2]. Yurchenco JA, et al. Nafcillin and oxacillin: comparative antistaphylococcal activity in mice. J Antibiot (Tokyo). 1976 Apr;29(4):460-5.
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Caution: Product has not been fully validated for medical applications. For research use only.

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