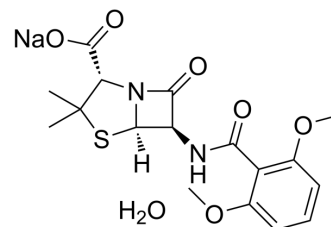


## Methicillin sodium hydrate

<b>Cat. No.:</b>	HY-121544A
<b>CAS No.:</b>	7246-14-2
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>21</sub> N <sub>2</sub> NaO <sub>7</sub> S
<b>Molecular Weight:</b>	420.41
<b>Target:</b>	Bacterial; Antibiotic; Histamine Receptor; Penicillin-binding protein (PBP)
<b>Pathway:</b>	Anti-infection; GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Methicillin sodium hydrate is a narrow-spectrum $\beta$ -lactam antibiotic, acts by inhibiting penicillin-binding proteins (PBPs). Methicillin sodium hydrate is active against <i>Staphylococcus aureus</i> and <i>Staphylococcus epidermidis</i> that are resistant to other penicillins. Methicillin sodium hydrate can be used for the research of skin infections, osteomyelitis, and endocarditis [1].
<b>IC<sub>50</sub> &amp; Target</b>	$\beta$ -lactam
<b>In Vitro</b>	Methicillin sodium hydrate (20 $\mu$ g/mL, 24 h) results in a rapid decrease in CFU of <i>S. aureus</i> [2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Methicillin sodium hydrate (Intramuscular administration, 40 mg/kg every 6 h, 5 days), in <i>S. aureus</i> -infected rabbits[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

- Nano Today. 2022, 47: 101683.
- Sci Rep. 2021 Apr 22;11(1):8690.
- Research Square Print. October 6th, 2022.
- Biomed Res Int. 2018 Jul 2;2018:3579832.

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

### REFERENCES

- [1]. Sharon S. Castle. Methicillin. xPharm: The Comprehensive Pharmacology Reference 2007, Pages 1-4.
- [2]. Jaime Carrizosa, et al. Treatment of Experimental *Staphylococcus aureus* Endocarditis: Comparison of Cephalothin, Cefazolin, and Methicillin. *Antimicrob Agents Chemother.* 1978 Jan; 13(1): 74-77.

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

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