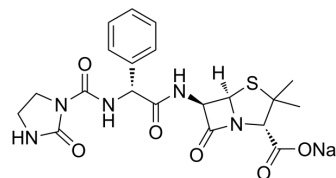


## Azlocillin sodium salt

<b>Cat. No.:</b>	HY-B0529A
<b>CAS No.:</b>	37091-65-9
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>22</sub> N <sub>5</sub> NaO <sub>6</sub> S
<b>Molecular Weight:</b>	483.47
<b>Target:</b>	Bacterial; Antibiotic; Parasite
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (206.84 mM; Need ultrasonic)					
	H <sub>2</sub> O : 6.67 mg/mL (13.80 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		2.0684 mL	10.3419 mL	20.6838 mL
<b>5 mM</b>			0.4137 mL	2.0684 mL	4.1368 mL	
<b>10 mM</b>		0.2068 mL	1.0342 mL	2.0684 mL		
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (206.84 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 (5.17 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.17 mM); Clear solution					
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.17 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Azlocillin sodium salt (Sodium azlocillin), a semisynthetic penicillin, is a broad spectrum β-lactam antibiotic. Azlocillin sodium salt shows antipseudomonal activity, and also potent against the malarial parasite Plasmodium falciparum <sup>[1][2][3]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	Plasmodium	β-lactam
<b>In Vitro</b>	Over 75% of the isolates of Pseudomonas aeruginosa are inhibited by Azlocillin at a concentration of 12.5 μg/mL. Azlocillin is	

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also active against indole-negative and -positive *Proteus* spp., inhibiting 98% and 71%, respectively, at a concentration of 12.5 µg/mL. Gram-positive cocci except penicillin G-resistant *Staphylococcus aureus* are susceptible to Azlocillin<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Azlocillin (75 mg/kg) treatment increases the survival of neutropenic mice infected with *Escherichia coli* or *Klebsiella pneumoniae*<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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**REFERENCES**

[1]. D Stewart, et al. Azlocillin: in vitro studies of a new semisynthetic penicillin. *Antimicrob Agents Chemother.* 1977 May;11(5):865-70.

[2]. S H Zinner, et al. In vitro and in vivo studies of three antibiotic combinations against gram-negative bacteria and *Staphylococcus aureus*. *Antimicrob Agents Chemother.* 1981 Oct;20(4):463-9.

[3]. Jennifer L Weisman, et al. Searching for new antimalarial therapeutics amongst known drugs. *Chem Biol Drug Des.* 2006 Jun;67(6):409-16.

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

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