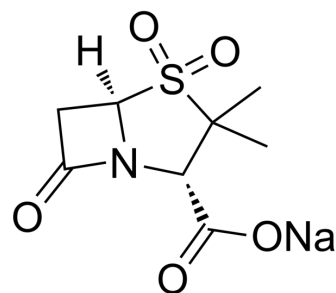


## Sulbactam sodium

<b>Cat. No.:</b>	HY-B0334A
<b>CAS No.:</b>	69388-84-7
<b>Molecular Formula:</b>	C <sub>8</sub> H <sub>10</sub> NNaO <sub>5</sub> S
<b>Molecular Weight:</b>	255.22
<b>Target:</b>	Antibiotic; Bacterial
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (391.82 mM)  
 DMSO : 50 mg/mL (195.91 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.9182 mL	19.5909 mL	39.1819 mL
	5 mM	0.7836 mL	3.9182 mL	7.8364 mL
	10 mM	0.3918 mL	1.9591 mL	3.9182 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (8.15 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (8.15 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (8.15 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Sulbactam (CP45899) sodium is a competitive, irreversible beta-lactamase inhibitor. Sulbactam sodium shows antimicrobial activity against multidrug-resistant (MDR) acinetobacter calcoaceticus--Acinetobacter baumannii (Acb) complex<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

β-lactam

#### In Vitro

Ampicillin-Sulbactam has a wide range of antibacterial activity that includes Gram-positive and Gram-negative aerobic and

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anaerobic bacteria<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Nat Commun. 2022 Mar 2;13(1):1116.
- Antimicrob Agents Chemother. 2023 May 18;e0160322.
- Infect Drug Resist. 2020 Aug 18;13:2883-2890.
- Microbiol Spectr. 2023 Apr 24;e0069223.
- Microbiol Spectr. 2022 Dec 8;e0303822.

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

## REFERENCES

[1]. Noguchi JK, et al. Sulbactam: a beta-lactamase inhibitor. Clin Pharm. 1988;7(1):37-51.

[2]. Lin HS, et al. Sulbactam treatment for pneumonia involving multidrug-resistant Acinetobacter calcoaceticus-Acinetobacter baumannii complex. Infect Dis (Lond). 2015;47(6):370-378.

[3]. Betrosian AP, et al. Ampicillin-sulbactam: an update on the use of parenteral and oral forms in bacterial infections. Expert Opin Drug Metab Toxicol. 2009;5(9):1099-1112.

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

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