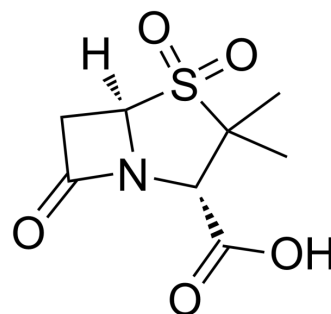


Sulbactam

Cat. No.:	HY-B0334		
CAS No.:	68373-14-8		
Molecular Formula:	C ₈ H ₁₁ NO ₅ S		
Molecular Weight:	233.24		
Target:	Bacterial; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (428.74 mM)
 H₂O : 20 mg/mL (85.75 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		4.2874 mL	21.4371 mL	42.8743 mL
	5 mM		0.8575 mL	4.2874 mL	8.5749 mL
	10 mM		0.4287 mL	2.1437 mL	4.2874 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (428.74 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulbactam (CP45899) is a competitive, irreversible beta-lactamase inhibitor. Sulbactam shows antimicrobial activity against multidrug-resistant (MDR) acinetobacter calcoaceticus--Acinetobacter baumannii (Acb) complex^{[1][2]}.

IC ₅₀ & Target	β-lactam
In Vitro	Sulbactam has a wide range of antibacterial activity that includes Gram-positive and Gram-negative aerobic and anaerobic bacteria ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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

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.

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

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