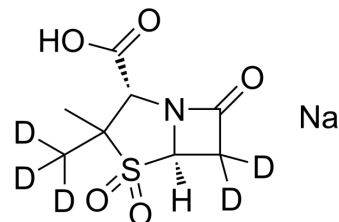


## Sulbactam-d<sub>5</sub> sodium

Cat. No.:	HY-B0334AS
CAS No.:	1322625-44-4
Molecular Formula:	C <sub>8</sub> H <sub>6</sub> D <sub>5</sub> NNaO <sub>5</sub> S
Molecular Weight:	260.25
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (384.25 mM)  
 DMSO : 50 mg/mL (192.12 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		Concentration	1 mg	5 mg	10 mg
	1 mM		3.8425 mL	19.2123 mL	38.4246 mL
	5 mM		0.7685 mL	3.8425 mL	7.6849 mL
	10 mM		0.3842 mL	1.9212 mL	3.8425 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Sulbactam-d<sub>5</sub> (sodium) is the deuterium labeled Sulbactam sodium. 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[1][2].

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

β-lactam

#### In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.

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

### REFERENCES

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- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Noguchi JK, et al. Sulbactam: a beta-lactamase inhibitor. *Clin Pharm.* 1988;7(1):37-51.
- [3]. Lin HS, et al. Sulbactam treatment for pneumonia involving multidrug-resistant *Acinetobacter calcoaceticus*-*Acinetobacter baumannii* complex. *Infect Dis (Lond).* 2015;47(6):370-378.
- [4]. 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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