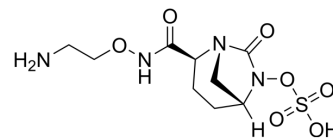


Nacubactam

Cat. No.:	HY-109008
CAS No.:	1452458-86-4
Molecular Formula:	C ₉ H ₁₆ N ₄ O ₇ S
Molecular Weight:	324.31
Target:	Bacterial; Beta-lactamase
Pathway:	Anti-infection
Storage:	-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

DMSO : 250 mg/mL (770.87 mM; Need ultrasonic)
H₂O : 50 mg/mL (154.17 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.0835 mL	15.4173 mL	30.8347 mL
	5 mM	0.6167 mL	3.0835 mL	6.1669 mL
	10 mM	0.3083 mL	1.5417 mL	3.0835 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 (308.35 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (6.41 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (6.41 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (6.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nacubactam (OP0595 free acid) is a potent non-β-lactam-β-lactamase inhibitor with activity against class A and class C β-lactamases. Nacubactam (OP0595 free acid) acts as a penicillin binding protein (PBP) 2-active antibacterial, and gives β-lactamase-independent potentiation of β-lactams targeting other PBPs^{[1][2]}.

IC₅₀ & Target

non-β-lactam-β-lactamase^[1]

REFERENCES

- [1]. Monogue ML, et al. In Vivo Efficacy of Meropenem with a Novel Non- β -Lactam- β -Lactamase Inhibitor, Nacubactam, against Gram-Negative Organisms Exhibiting Various Resistance Mechanisms in a Murine Complicated Urinary Tract Infection Model. *Antimicrob Agents Chemother*. 2018 Aug 27;62(9).
- [2]. Livermore DM, et al. Activity of OP0595/ β -lactam combinations against Gram-negative bacteria with extended-spectrum, AmpC and carbapenem-hydrolysing β -lactamases. *J Antimicrob Chemother*. 2015 Nov;70(11):3032-41.
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Caution: Product has not been fully validated for medical applications. For research use only.

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