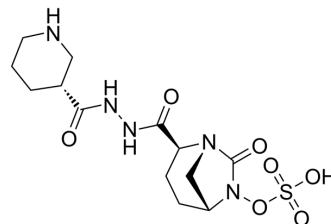


Zidebactam

Cat. No.:	HY-120859		
CAS No.:	1436861-97-0		
Molecular Formula:	C ₁₃ H ₂₁ N ₅ O ₇ S		
Molecular Weight:	391.4		
Target:	Bacterial; Beta-lactamase; Penicillin-binding protein (PBP)		
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 : 250 mg/mL (638.73 mM; Need ultrasonic)
 H₂O : 100 mg/mL (255.49 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.5549 mL	12.7747 mL	25.5493 mL
	5 mM	0.5110 mL	2.5549 mL	5.1099 mL
	10 mM	0.2555 mL	1.2775 mL	2.5549 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 (255.49 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 1.98 mg/mL (5.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Zidebactam (WCK-5107) is a potent β-lactamase inhibitor^[1]. Zidebactam also is a penicillin-binding protein2 (PBP2) inhibitor with an IC₅₀ of 0.26 μg/mL^[2].

IC₅₀ & Target

IC₅₀: 0.26 μg/mL (P. aeruginosa PAO1 PBP2)^[2]

In Vitro

Zidebactam (WCK-5107) inhibits WT Enterobacteriaceae with a MIC₅₀ of 0.25 mg/L. Zidebactam alone exhibits variable activity when tested against *E. coli* (MIC_{50/90} 0.12/0.12 mg/L) and *Enterobacter* spp. (MIC_{50/90} 0.12/0.25 mg/L)^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Antimicrob Chemother. 2023 Mar 15;dkad061.
- Antimicrob Agents Chemother. 2023 May 31;e0033923.
- Antimicrob Agents Chemother. 2021 Nov 22;AAC0167621.
- Antibiotics (Basel). 2021, 10(11), 1341.
- Microbiol Spectr. 2022 Feb 23;10(1):e0267821.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Sader HS, et al. WCK 5222 (cefepime/zidebactam) antimicrobial activity tested against Gram-negative organisms producing clinically relevant β -lactamases. J Antimicrob Chemother. 2017 Jun 1;72(6):1696-1703.

[2]. Moya B, et al. WCK 5107 (Zidebactam) and WCK 5153 Are Novel Inhibitors of PBP2 Showing Potent " β -Lactam Enhancer" Activity against *Pseudomonas aeruginosa*, Including Multidrug-Resistant Metallo- β -Lactamase-Producing High-Risk Clones. Antimicrob Agents Chemother. 2017 May 24;61(6).

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

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