Clavulanate lithium

Cat. No.: HY-A0256B

CAS No.: 61177-44-4

Molecular Formula: $C_8H_8LiNO_5$

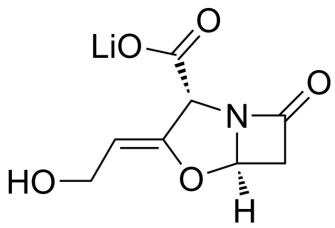
Molecular Weight: 205.09

Target: Bacterial; Antibiotic; Beta-lactamase

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 33.33 mg/mL (162.51 mM; Need ultrasonic)

DMSO : 4.17 mg/mL (20.33 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.8759 mL	24.3795 mL	48.7591 mL
5 mM	0.9752 mL	4.8759 mL	9.7518 mL
10 mM	0.4876 mL	2.4380 mL	4.8759 mL

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

BIOLOGICAL ACTIVITY

Description

Clavulanate lithium is a potent β-lactamase inhibitor and acts as an antibiotic[1][2].

IC_{50} & Target

β-lactam

In Vitro

Clavulanate lithium has weak antibacterial activity against most organisms when administered alone, but given in combination with beta-lactam antibiotics prevents antibiotic inactivation by microbial lactamase[1].

?Clavulanate lithium (0.25, 0.5 mg/L) causes a relatively slow inhibition of growth, and a higher concentration (1 mg/L) is only marginally more effective than 0.5 mg/L[2].

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

Cell Viability Assay[2]

Cell Line:	L. pneumophila NCTC 1119
Concentration:	0.25 mg/L, 0.5 mg/L, 1 mg/L
Incubation Time:	0-35 hours

Result:	Caused a relatively slow inhibition of growth.

CUSTOMER VALIDATION

- Nat Commun. 2022 Mar 2;13(1):1116.
- Int J Mol Sci. 2023 Oct 27, 24(21), 15657.
- Genomics. 2022: 110527.
- Biomed Res Int. 2018 Jul 2;2018:3579832.

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REFERENCES

[1]. Reading C, et al. Clavulanic Acid: a Beta-Lactamase-Inhibiting Beta-Lactam from Streptomyces clavuligerus. Antimicrob Agents Chemother. 1977 May; 11(5): 852–857.

[2]. Stokes DH, et al. Bactericidal effects of amoxycillin/clavulanic acid against intracellular Legionella pneumophila in tissue culture studies. J Antimicrob Chemother. 1989 Apr;23(4):547-56.

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