Data Sheet (Cat.No.T0049)

TargetMol

Azlocillin sodium salt

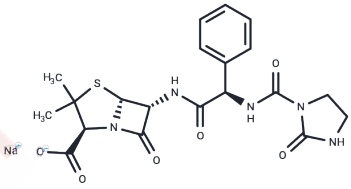
Chemical Properties

CAS No. : 37091-65-9

Formula: C20H22N5NaO6S

Molecular Weight: 483.47

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Azlocillin sodium, an acylampicillin, is a broad-spectrum antibiotics
Targets(IC50)	Antibacterial,Antibiotic,Parasite
In vitro	Azlocillin (12.5 μg/mL) inhibits over 75% of the isolates of Pseudomonas aeruginosa. Azlocillin (12.5 μg/mL) is also active against indole-negative and -positive Proteus spp., inhibiting 98 and 71%, respectively. Azlocillin is more active than mezlocillin, ticarcillin, and carbenicillin and as active as BLP-1654 against isolates of P. aeruginosa. [1] The acyl side chains of Azlocillin have an ureido-(urea) structurehence the name 'ureidopenicillins' or, more specifically, 'acylureidopenicillins.' In vitro studies against P. aeruginosa demonstrates that piperacillin has activity that is twice that of azlocillin, 4 times that of mezlocillin and ticarcillin, and about 8 times that of carbenicillin. Azlocillin produces elongated bacterial forms with delayed or no lysis in morphologic studies. [2] Azlocillin has MICs of 12.5 μg/mL on Pseudomonas aeruginosa. Azlocillin (3.125 μg/mL) results in a reduction in the rate of growth but no bactericidal phase on Pseudomonas aeruginosa. Azlocillin decreases an initial lag phase with increasing drug concentration. At the lower concentration of tobramycin (0.5 μg/ml), the combinations with both the high and the low concentrations of Azlocillin are more effective than the individual components on Pseudomonas aeruginosa. [3] Isolates with derepression of AmpC enzyme are one to two doubling dilutions more resistant to azlocillin than are those in which increased efflux or impermeability is inferred. Those with secondary β-lactamases are mostly (12/14 cases) susceptible to ceftazidime at 4 mg/L, but are amongst the most resistant to Azlocillin (MIC ≥128 mg/L in 10/14 cases). [4]

Solubility Information

Solubility	DMSO: 250 mg/mL (517.1 mM),Sonication is recommended. H2O: 89 mg/mL (184.09 mM),Sonication is recommended. Ethanol: 3 mg/mL (6.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.83 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (20.68 mM),Solution.

In vivo Formulation	*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0684 mL	10.3419 mL	20.6838 mL
5 mM	0.4137 mL	2.0684 mL	4.1368 mL
10 mM	0.2068 mL	1.0342 mL	2.0684 mL
50 mM	0.0414 mL	0.2068 mL	0.4137 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Stewart D, et al. Antimicrob Agents Chemother, 1977, 11(5), 865-870.
Wright AJ, et al. Mayo Clin Proc, 1999, 74(3), 290-307.
McFarland MM, et al. Antimicrob Agents Chemother, 1994, 38(6), 1271-1276.
Livermore DM, et al. J Antimicrob Chemother, 1999, 43(4), 517-522.
Johnson PR, et al. J Antimicrob Chemother, 1992, 30(2), 203-214.