Mezlocillin sodium

Cat. No.: HY-B1466

CAS No.: 42057-22-7

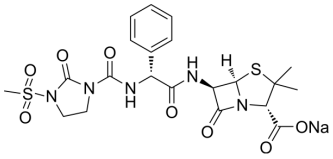
Molecular Formula: $C_{21}H_{24}N_5NaO_8S_2$

Molecular Weight: 561.56

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage: 4°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 (445.19 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7808 mL	8.9038 mL	17.8075 mL
	5 mM	0.3562 mL	1.7808 mL	3.5615 mL
	10 mM	0.1781 mL	0.8904 mL	1.7808 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.70 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.70 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Mezlocillin (BAY-f 1353) sodium is a β-lactam antibiotic, a semisynthetic and extended-spectrum antibiotic. Mezlocillin sodium is active against both gram-negative and gram-positive bacteria. Mezlocillin sodium can be used in bacterial infection research[1][2].

IC_{50} & Target

β-lactam

In Vivo

Mezlocillin (subcutaneous injection; 1.7-5.7 mg/kg; twice daily; 7 d) treatment in vivo suppresses the IgM and IgG responses and the delayed-type hypersensitivity reaction, observes the loss of hair, and inhibits lymphocyte proliferation of animals

treated with all doses[1].

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

Animal Model:	Male Balb/c mice[1]
Dosage:	1.7, 4.3, and 5.7 mg/kg
Administration:	Subcutaneous injection; 1.7, 4.3, and 5.7 mg/kg; twice daily; 7 days
Result:	Suppressed the IgM and IgG responses and the delayed-type hypersensitivity reaction treated with all doses. Observed a loss of hair in the majority of animals treated with all doses. Inhibited lymphocyte proliferation of spleen-cell cultures from animals.

REFERENCES

[1]. Roszkowski W, et al. Antibiotics and immunomodulation: effects of cefotaxime, amikacin, mezlocillin, piperacillin and clindamycin. Med Microbiol Immunol. 1985;173(5):279-89.

[2]. Bodey GP, et al. Mezlocillin: in vitro studies of a new broad-spectrum penicillin. Antimicrob Agents Chemother. 1977 Jan;11(1):74-9.

[3]. Kristof RA, et al. Treatment of accidental high dose intraventricular mezlocillin application by cerebrospinal fluid exchange. J Neurol Neurosurg Psychiatry. 1998 Mar;64(3):379-81.

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