Lincomycin hydrochloride monohydrate

Cat. No.: HY-B1358

CAS No.: 7179-49-9

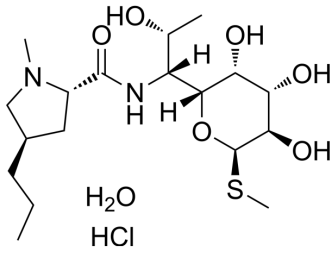
Molecular Formula: $C_{18}H_{37}ClN_2O_7S$

Molecular Weight: 461.01

Target: Bacterial; Antibiotic

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

DMSO : ≥ 100 mg/mL (216.92 mM)

H_2O : 50 mg/mL (108.46 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1692 mL	10.8458 mL	21.6915 mL
5 mM	0.4338 mL	2.1692 mL	4.3383 mL
10 mM	0.2169 mL	1.0846 mL	2.1692 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 120 mg/mL (260.30 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.42 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lincomycin hydrochloride monohydrate is a narrow-spectrum antibiotic, has similar effects to erythromycin, which has a good effect on gram-positive coccus, mainly used to inhibit the synthesis of bacterial cell protein[1][2].

In Vivo

Lincomycin (25 and 50 mg/kg, intravenously) depresses neuromuscular transmission to a degree which depended on stimulation frequencies in the rabbit sciatic nerve-gastrocnemius muscle preparation[3].

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

Animal Model:	Adult albino New Zealand rabbits weighing 2.5-3.5 kg[3].
Dosage:	25 and 50 mg/kg.
Administration:	Intravenously.
Result:	Depressed neuromuscular transmission.

CUSTOMER VALIDATION

- Chemosphere. 2019 Jun;225:378-387.
- Microb Biotechnol. 2021 Mar 15.

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REFERENCES

[1]. MACLEOD AJ, et al. LINCOMYCIN: A NEW ANTIBIOTIC ACTIVE AGAINST STAPHYLOCOCCI AND OTHER GRAM-POSITIVE COCCI: CLINICAL AND LABORATORY STUDIES. Can Med Assoc J. 1964 Nov 14;91:1056-60.

[2]. Lin AH, et al. The oxazolidinone eperezolid binds to the 50S ribosomal subunit and competes with binding of chloramphenicol and lincomycin. Antimicrob Agents Chemother. 1997 Oct;41(10):2127-31.

[3]. P R McMaster, et al. The effect of two chlorinated lincomycin analogues against acute toxoplasmosis in mice. Am J Trop Med Hyg. 1973 Jan;22(1):14-7.

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