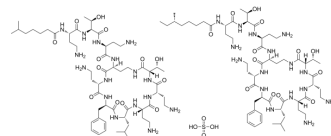


Polymyxin B Sulfate

Cat. No.:	HY-A0248
CAS No.:	1405-20-5
Molecular Weight:	1199.75 (average)
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 : 33.33 mg/mL (Need ultrasonic) H ₂ O : 16.67 mg/mL (Need ultrasonic)
In Vivo	- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution - Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution - Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Polymyxin B Sulfate is a potent antibacterial agent and a relatively toxic antibiotic. Polymyxin B Sulfate also is a antiendotoxin agent. Polymyxin B Sulfate shows endotoxin-neutralizing properties can be used as adjunctive research in gram-negative sepsis. Polymyxin B Sulfate shows antibacterial activities in vitro and in vivo ^{[1][2][3]} .	
In Vitro	Polymyxin B Sulfate shows antibacterial activities with MICs of 0.5 mg/l for E. coli strain IH3080 ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Polymyxin B Sulfate (0.5-120 mg/kg; s.c.) shows antibacterial activities in thigh or lung infection mouse model ^[2] . Polymyxin B Sulfate (2 mg/kg, s.c.) shows potent in mouse bactericidal effect against E. coli strain IH3080 ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Eight-week-old, 24-30 g, female Swiss mice ^[2]
	Dosage:	0.5-120 mg/kg for thigh infection model; 5-120 mg/kg for lung infection mode
	Administration:	S.c.
	Result:	Showed antibacterial activities for three K. pneumoniae strains.

Animal Model:	7-9 weeks, female NMRI mice (E. coli IH3080) ^[3]
Dosage:	2 mg/kg
Administration:	S.c.
Result:	Decreased the bacterial count in a dose dependent manner.

CUSTOMER VALIDATION

- ACS Nano. 2021 Mar 23;15(3):4173-4185.
- Mater Today Bio. 2025 Apr.
- Biomed Pharmacother. 2023 Nov 8;115856.
- Transl Psychiatry. 2022 Apr 7;12(1):146.
- iScience. 2024 Sep 24;27(10):111027.

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REFERENCES

- [1]. Danner RL, et al. Purification, toxicity, and antiendotoxin activity of polymyxin B nonapeptide. Antimicrob Agents Chemother. 1989 Sep;33(9):1428-34.
- [2]. Landersdorfer CB, et al. Pharmacokinetics/pharmacodynamics of systemically administered polymyxin B against Klebsiella pneumoniae in mouse thigh and lung infection models. J Antimicrob Chemother. 2018 Feb 1;73(2):462-468.
- [3]. Vingsbo Lundberg C, et al. Novel polymyxin derivatives are effective in treating experimental Escherichia coli peritoneal infection in mice. J Antimicrob Chemother. 2010 May;65(5):981-5.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite F, Monmouth Junction, NJ 08852, USA