

## Polymyxin B

## Chemical Properties

CAS No. : 1404-26-8

Formula:

Molecular Weight:

Storage: Keep away from moisture, Store at low temperature  
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	Polymyxin B is a polymyxin antibiotic with antimicrobial activity that acts by binding with high affinity to the LPS of the bacterial wall and by increasing the permeability of the bacterial cell membrane, and is used in the study of infections caused by drug-resistant (XDR) Gram-negative bacteria (GNB) Polymyxin B is used in the study of endotoxemia.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	10 µg/mL Polymyxin B, treated for 6 hours, reduced TNF-α and IL-10 production in human peripheral blood mononuclear cells (PBMCs). [3]
In vivo	Polymyxin B was administered intravenously once daily for seven consecutive days at a dose range of 5-20 mg/kg Polymyxin B. The treatment of PBMCs with Polymyxin B for six hours reduced TNF-α and IL-10 production. A nephrotoxicity endpoint was observed in the Sprague-Dawley rat model at the 20 mg/kg dose, whereas no such endpoint was observed at the 5 mg/kg dose. [2]

## Solubility Information

Solubility	H2O: 16.67 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Reference

- Martin EL, et al. Endotoxin removal: how far from the evidence? The EUPHAS 2 Project. Contrib Nephrol. 2010;167: 119-125.
- Cui R, Zhang J, Liu X, et al. Dronedarone Enhances the Antibacterial Activity of Polymyxin B and Inhibits the Quorum Sensing System by Interacting with LuxS. ACS Infectious Diseases. 2024
- Martin EL, et al. Endotoxin removal: how far from the evidence? The EUPHAS 2 Project. Contrib Nephrol. 2010;167: 119-125.
- Cardoso LS, et al. Polymyxin B as inhibitor of LPS contamination of Schistosoma mansoni recombinant proteins in human cytokine analysis. Microb Cell Fact. 2007 Jan 3;6:1.

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