

PRODUCT INFORMATION



Polymyxin B₁ Item No. 14074

CAS Registry No.: 4135-11-9
Formal Name: (S)-N-((S)-4-amino-1-(((2S,3R)-1-(((S)-4-amino-1-oxo-1-(((3S,6S,9S,12S,15R,18S,21S)-6,9,18-tris(2-aminoethyl)-15-benzyl-3-((R)-1-hydroxyethyl)-12-isobutyl-2,5,8,11,14,17,20-heptaaxo-1,4,7,10,13,16,19-heptaazacyclotricosan-21-yl)amino)butan-2-yl)amino)-3-hydroxy-1-oxobutan-2-yl)amino)-1-oxobutan-2-yl)-6-methyloctanamide

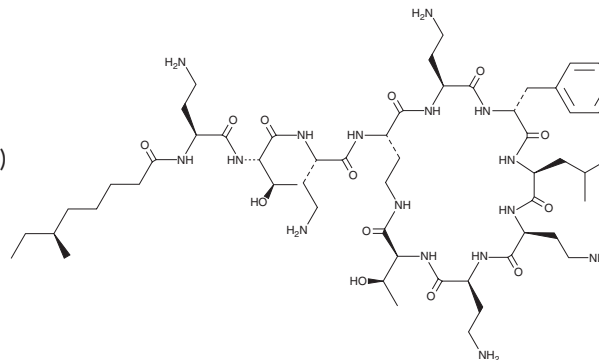
MF: C₅₆H₉₈N₁₆O₁₃
FW: 1,203.5

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Polymyxin B₁ is supplied as a crystalline solid. A stock solution may be made by dissolving the polymyxin B₁ in the solvent of choice, which should be purged with an inert gas. The solubility of Polymyxin B₁ in 1N HCl is approximately 10 mg/ml.

Description

The polymyxins are cationic peptides originally isolated from *B. polymyxa*.¹ They bind and kill Gram-negative bacteria.² The B series of polymyxins consist of a cyclic heptapeptide and a tripeptide side chain acylated at the amino terminus by a fatty acid. Polymyxin B₁ is a form of polymyxin B which terminates with 6-methyloctanamide. Polymyxin B₁ is comparable to other B polymyxins in its ability to kill *P. aeruginosa*, *A. baumannii*, and *K. pneumoniae* isolates.³ Its relative pharmacokinetics and nephrotoxicity have not been examined.

References

1. Falagas, M.E. and Kasiakou, S.K. Toxicity of polymyxins: A systematic review of the evidence from old and recent studies. *Crit. Care* **10(1)**, (2006).
2. Hancock, R.E.W. Cationic peptides: Effectors in innate immunity and novel antimicrobials. *Lancet Infect. Dis.* **1(3)**, 156-164 (2001).
3. Tam, V.H., Cao, H., Ledesma, K.R., et al. *In vitro* potency of various polymyxin B components. *Antimicrob. Agents Chemother.* **55(9)**, 4490-4491 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/01/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM