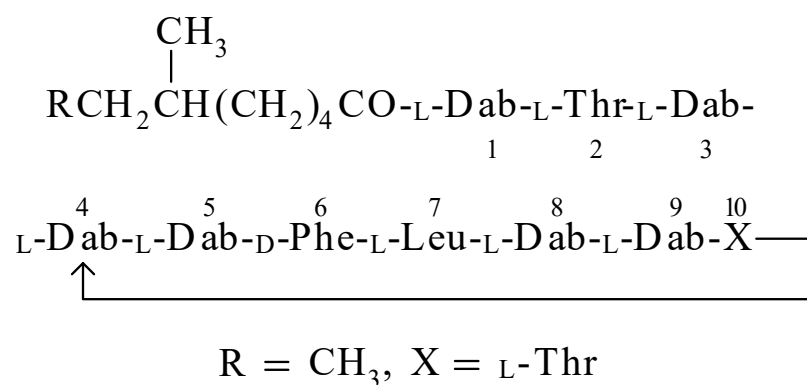




>>Entry Name: Polymyxin B₁



CAS Registry Number: 4135-11-9

Molecular Formula: C₅₆H₉₈N₁₆O₁₃

Molecular Weight: 1203.49

Accurate Mass: 1202.749929

Percentage Composition: C 55.89%; H 8.21%; N 18.62%; O 17.28%

Biological Source: Isol. from *Bacillus polymyxa*

Biological Use/Importance: Antibacterial agent

Solubility: BERDY SOL: Sol. acids; fairly sol. MeOH; poorly sol. H₂O, butanol, hexane

UV: [neutral] λ_{max} 252 (); 259 (); 264 () (H₂O) (Berdy)

Hazard & Toxicity: BERDY HAZD : LD₅₀ (mus, ivn) 6 - 9 mg/kg , LD₅₀ (mus, ipr) 19 mg/kg , LD₅₀ (mus, scu) 80 mg/kg

>>Derivative: Hydrochloride (1:5)

CAS Registry Number: 6883-64-3

Optical Rotation: [α]_D²⁵ -85.1 (c, 2.33 in EtOH aq.)

>>Derivative: Phosphate (1:5)

CAS Registry Number: 65814-04-2

Optical Rotation: [α]_D²⁵ -72 (c, 0.35 in H₂O)

Other Data: Dec. at ca. 185-188°

>>Derivative: Mixt. with Polymyxin B₂

Synonym(s): Polymyxin B, INN. Aerosporin. Bacillosporin. Mastimyxin. Polmix. Mikitaicin B

CAS Registry Number: 1404-26-8

Biological Use/Importance: Protein kinase C antagonist and calmodulin inhibitor. Antiendotoxin props., active against gram-negative bacteria. Immunostimulant.

Enhances catabolism of LDL *in vitro*

Optical Rotation: [α]_{Hg} -106.3 (1M HCl)

Other Data: Polymyxin B conjugated to dextran 70 (PMX 622) has reduced toxicity. Used in the adjunctive therapy of gram-negative sepsis

Hazard & Toxicity: Main adverse effects from parenteral administration are dose-related neurotoxicity and nephrotoxicity. Ototoxic *via* topical use

>>Derivative: Sulfomethylated deriv., mixt. with Polymyxins B₂ and B₃

Synonym(s): Sulfomyxin, INN. Dynamyxin

CAS Registry Number: 1405-52-3

Biological Use/Importance: Antibiotic used in the treatment of *E. coli* infections

Other Data: Used as penta-Na salt Sulphomyxin sodium, BAN

>>Derivative: Mixt. with Polymyxin B₂; sulfate

Synonym(s): Polymyxin B sulfate, JAN, USAN

CAS Registry Number: 1405-20-5

Fluka: 81334

Sigma: P4932

References: