

Product Data Sheet

Product Name: Polymyxin B nonapeptide

Cat. No.: GC33369

Chemical Properties

Cas. No. 86408-36-8

SMILES Thr-{Dab}-{Dab}-{Dab}-{Dab}-d-Phe-Leu-{Dab}-{Dab}-Thr (Lactam: Dab3-Thr9)

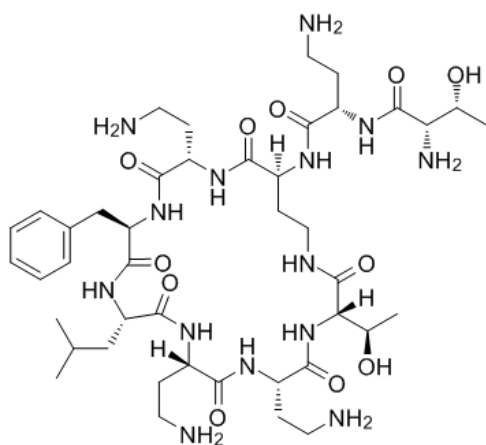
Formula $C_{43}H_{74}N_{14}O_{11}$ M.Wt 963.13

Solubility Water: ≥ 100 mg/mL (103.83 mM); DMSO: 16.67 mg/mL (17.31 mM) Storage Store at -20°C , protect from light

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Polymyxin B nonapeptide is a cationic cyclic peptide that enhances the outer membrane of Gram-negative bacteria^[1]. Polymyxin B nonapeptide disrupts the outer membrane structure of *Escherichia coli*, alters cell membrane permeability at very low concentrations, and promotes the release of periplasmic proteins and lipopolysaccharide^[2]. Polymyxin B nonapeptide has been widely used in antibacterial research to enhance the antibacterial efficacy of combined antibiotics and reduce the

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

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frequency of bacterial resistance to antibiotics^[3].

References:

[1] Tsubery H, Ofek I, Cohen S, et al. N-terminal modifications of polymyxin B nonapeptide and their effect on antibacterial activity[J]. Peptides, 2001, 22(10): 1675-1681.

[2] Sahalan A Z, Dixon R A. Role of the cell envelope in the antibacterial activities of polymyxin B and polymyxin B nonapeptide against Escherichia coli[J]. International journal of antimicrobial agents, 2008, 31(3): 224-227.

[3] Kim S J, Jo J, Kim J, et al. Polymyxin B nonapeptide potentiates the eradication of Gram-negative bacterial persisters[J]. Microbiology Spectrum, 2024, 12(4): e03687-23.

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