

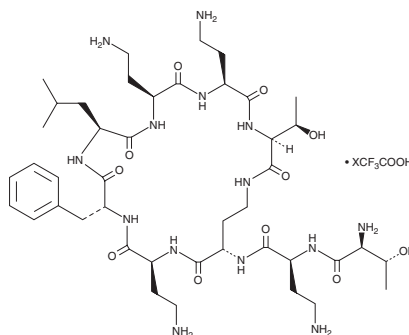
PRODUCT INFORMATION



Polymyxin B Nonapeptide (trifluoroacetate salt)

Item No. 42533

CAS Registry No.: 3041171-24-5
Formal Name: 2-10-polymyxin B₁, trifluoroacetate salt
Synonyms: PBNP, PMBN
MF: C₄₃H₇₄N₁₄O₁₁ • XCF₃COOH
FW: 963.1
Purity: ≥95%
Supplied as: A 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 B nonapeptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the polymyxin B nonapeptide (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Polymyxin B nonapeptide (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of polymyxin B nonapeptide (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Polymyxin B nonapeptide (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Polymyxin B nonapeptide is an antibiotic potentiator and a polymyxin B (Item No. 14157) derivative lacking the acyl chain.¹ It increases the sensitivity of *E. coli* to various antibiotics, including erythromycin (Item No. 16486), rifampicin (Item No. 14423), fusidic acid (Item No. 14825), novobiocin (Item No. 18457), and cloxacillin (Item No. 22249). Polymyxin B nonapeptide (8 µg/ml), in combination with linezolid (Item No. 15012), increases survival in a *C. elegans* model of *K. pneumoniae* infection.² It has been used to increase electroporation-based transformation frequency.³

References

1. Vaara, M., and Vaara, T. Sensitization of Gram-negative bacteria to antibiotics and complement by a nontoxic oligopeptide. *Comparative Study* **303(5917)**, 526-528 (1983).
2. Huang, T., Lv, Z., Lin, J., et al. A potent antibiotic combination of linezolid and polymyxin B nonapeptide against *Klebsiella pneumoniae* infection *in vitro* and *in vivo*. *Front. Pharmacol.* **13**, 887941 (2022).
3. Qin, J., Hong, Y., Pulella, K., et al. A method for increasing electroporation competence of Gram-negative clinical isolates by polymyxin B nonapeptide. *Sci. Rep.* **12(1)**, 11629 (2022).

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.

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