

PRODUCT INFORMATION



Pap12-6 (trifluoroacetate salt)

Item No. 37454

Formal Name: (S)-N-((2S,5S,8S,11S,14S,17S)-2-((1H-indol-3-yl)methyl)-1,21-diamino-5,8-bis(4-aminobutyl)-11,14-diisopropyl-1,4,7,10,13,16-hexaoxo-3,6,9,12,15-pentaazahenicosan-17-yl)-2-((6S,9S,12S,15S,18S)-9-((1H-indol-3-yl)methyl)-1,6-diamino-12-(4-aminobutyl)-18-benzyl-15-((S)-sec-butyl)-1-imino-7,10,13,16-tetraoxo-2,8,11,14,17-pentaazanadecan-19-amido)-6-aminohexanamide, trifluoroacetate salt

H—Arg—Trp—Lys—Ile—Phe—Lys—Lys—Val—Val—Lys—

Lys—Trp—NH₂

• XCF₃COOH

Peptide Sequence: RWKIFKKVVKKW-NH₂

MF: C₈₃H₁₃₃N₂₃O₁₂ • XCF₃COOH

FW: 1,645.1

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

Pap12-6 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Pap12-6 (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Pap12-6 is an antibacterial peptide derived from the twelve N-terminal amino acids of the peptide papiliocin, which has been found in *P. xuthus* larvae.¹ It is active against a panel of eight Gram-negative bacteria, including *E. coli*, *P. aeruginosa*, and *S. syphimurium* (MIC_{50s} = 4-8 μM), and the Gram-positive bacteria *S. aureus*, methicillin-resistant *S. aureus* 3126 (MRSA-3126), *B. subtilis*, and *S. epidermidis* (MIC_{50s} = 4-8 μM) without affecting the viability of human erythrocytes, mouse RAW 264.7 macrophages, human HaCaT keratinocytes, or human HEK293 kidney cells at 25 μM. Pap12-6 induces membrane depolarization in *E. coli* when used at concentrations of 4 and 8 μM. Preincubation with Pap12-6 (10 μM) reduces nitrite (NO₂⁻), Tnf-α, and Il-6 secretion levels in LPS-stimulated RAW 264.7 macrophages. *In vivo*, Pap12-6 (10 mg/kg) increases survival in mice infected with *E. coli*, as well as reduces the number of colony forming units (CFUs) in the lungs, liver, and kidneys in *E. coli*-infected mice when administered at a dose of 1 mg/kg. Pap12-6 (1 mg/kg) reduces serum aspartate aminotransferase (AST) and alanine transaminase (ALT) levels and blood urea nitrogen levels in a mouse model of *E. coli*-induced sepsis.

Reference

1. Kim, J., Jacob, B., Jang, M., *et al.* Development of a novel short 12-meric papiliocin-derived peptide that is effective against Gram-negative sepsis. *Sci. Rep.* **9(1)**, 3817 (2019).

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

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