

PRODUCT INFORMATION



PKI (14-22) amide (myristoylated) (trifluoroacetate salt)

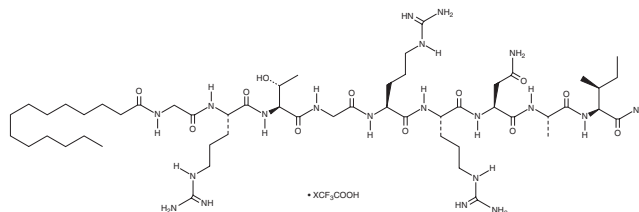
Item No. 34431

Formal Name: N-(1-oxotetradecyl)glycyl-L-arginyl-L-threonylglycyl-L-arginyl-L-arginyl-L-asparaginyl-L-alanyl-L-isoleucinamide, trifluoroacetate salt

Synonyms: Myr-Gly-Arg-Thr-Gly-Arg-Arg-Asn-Ala-Ile-NH₂, Myr-GRTGRRNAI-NH₂, Myristoylated PKI-(14-22)-amide, PKI-(Myr-14-22)-amide

MF: C₅₃H₁₀₀N₂₀O₁₂ • XCF₃COOH

FW: 1,209.5
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

PKI (14-22) amide (myristoylated) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the PKI (14-22) amide (myristoylated) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. PKI (14-22) amide (myristoylated) (trifluoroacetate salt) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

PKI (14-22) amide (myristoylated) (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PKI (14-22) amide (myristoylated) (trifluoroacetate salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PKI (14-22) amide (myristoylated) (trifluoroacetate salt) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PKI (14-22) amide (myristoylated) is a cell-permeable peptide inhibitor of protein kinase A (PKA).¹⁻³ It inhibits PKA activity in mouse brain or spinal cord lysates when used at a concentration of 75 μM.¹ PKI (14-22) amide (myristoylated) reduces IgG-dependent phagocytosis of heat-killed *S. cerevisiae* by isolated human neutrophils in a concentration-dependent manner.² It inhibits the replication of several strains of Zika virus, including IbH 30656, MR766, H/FP/2013, and PRVABC59, in human umbilical vein endothelial cells (HUVECs; IC₅₀s = 17.75, 22.29, 34.09, and 19.19 μM, respectively).³ PKI (14-22) amide (myristoylated) (2.5 nmol, i.c.v.) increases latency to tail withdrawal in the tail-flick test in morphine-tolerant mice.¹

References

1. Dalton, G.D., Smith, F.L., Smith, P.A., *et al.* Alterations in brain Protein Kinase A activity and reversal of morphine tolerance by two fragments of native Protein Kinase A inhibitor peptide (PKI). *Neuropharmacology* **48(5)**, 648-657 (2005).
2. Ydrenius, L., Majeed, M., Rasmusson, B.J., *et al.* Activation of cAMP-dependent protein kinase is necessary for actin rearrangements in human neutrophils during phagocytosis. *J. Leukoc. Biol.* **67(4)**, 520-528 (2000).
3. Cheng, F., da Silva, S.R., Huang, I.-C., *et al.* Suppression of Zika virus infection and replication in endothelial cells and astrocytes by PKA inhibitor PKI 14-22. *J. Virol.* **92(4)**, e02019-17 (2018).

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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