

Certificate of Analysis

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Product Name: PKI 14-22 amide, myristoylated

Catalog No.: 2546

Batch No.: 9

CAS Number: 201422-03-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₃H₁₀₀N₂₀O₁₂
Batch Molecular Weight: 1209.5
Physical Appearance: White lyophilised solid
Net Peptide Content: 70%
Counter Ion: Trifluoroacetate
Solubility: Soluble to 1 mg/ml in DMSO
Storage: Desiccate at -20°C
Peptide Sequence: Myr-Gly-Arg-Thr-Gly-Arg-Arg-Asn-Ala-Ile-NH₂

2. ANALYTICAL DATA

HPLC: Shows 99% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	1.00	1.01	Lys				
Arg	3.00	3.03	Met				
Asx	1.00	1.03	Phe				
Cys			Pro				
Glx			Ser				
Gly	2.00	1.97	Thr	1.00		0.97	
His			Trp				
Ile	1.00	0.99	Tyr				
Leu			Val				

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Cell-permeable version of protein kinase inhibitor PKI (14-22) amide. The non-myristoylated version inhibits protein kinase A ($K_i = 36$ nM), inhibits cell growth and induces apoptosis in human pancreatic cancer cells (PANC-1).

Physical and Chemical Properties:

Batch Molecular Formula: $C_{53}H_{100}N_{20}O_{12}$

Batch Molecular Weight: 1209.5

Physical Appearance: White lyophilised solid

Peptide Sequence:

Myr-Gly-Arg-Thr-Gly-Arg-Arg-Asn-Ala-Ile-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in DMSO

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 70% (Remaining weight made up of counterions and residual water).

Counter Ion: Trifluoroacetate

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Farrow et al (2003) Inhibition of pancreatic cancer cell growth and induction of apoptosis with novel therapies directed against protein kinase A. *Surgery* **134** 197. PMID: 12947318.

Zheng et al (2000) Activation of apolipoprotein AI gene expression by protein kinase A and kinase C through transcription factor, Sp1. *J.Biol.Chem.* **275** 31747. PMID: 10829013.

Glass et al (1989) Primary structural determinants essential for potent inhibition of cAMP-dependent protein kinase by inhibitory peptides corresponding to the active portion of the heat-stable inhibitory protein. *J.Biol.Chem.* **264** 8802. PMID: 2722799.

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