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Print Date: Jan 15th 2020

Certificate of Analysis

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Product Name: PKC ζ pseudosubstrate **Catalog No.:** 1791 **Batch No.:** 11

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{208}H_{336}N_{74}O_{44}S_3$

Batch Molecular Weight: 4673.59

Physical Appearance: White lyophilised solid

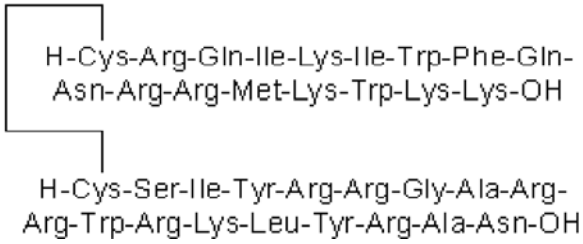
Net Peptide Content: 73%

Counter Ion: TFA

Solubility: Soluble to 2 mg/ml in water

Storage: Store at -20°C

Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 96.7% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	2.00	1.84	Lys	5.00	4.70
Arg	9.00	8.84	Met	1.00	1.07
Asx	2.00	1.94	Phe	1.00	1.03
Cys	2.00	Detected	Pro		
Glx	2.00	1.93	Ser	1.00	0.88
Gly	1.00	0.98	Thr		
His			Trp	3.00	Detected
Ile	3.00	2.72	Tyr	2.00	2.03
Leu	1.00	0.95	Val		

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: PKC ζ pseudosubstrate **Catalog No.:** 1791 **Batch No.:** 11

Description:

Inhibitor of protein kinase C (PKC) ζ; attached to cell permeabilisation Antennapedia domain vector peptide. Consists of amino acids 113 - 129 of PKC ζ pseudosubstrate domain linked by a disulphide bridge to the Antennapedia domain vector peptide. The Antennapedia peptide is actively taken up by intact cells, at 4 or 37°C, ensuring rapid and effective uptake of the inhibitor peptide. Once inside the cell, the disulphide bonds are subjected to reduction in the cytoplasm leading to release of the inhibitor peptide. Induces mast cell degranulation by a PKC ζ-independent pathway.

Physical and Chemical Properties:

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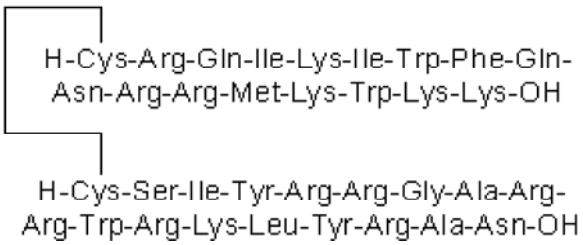

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

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: 73% (Remaining weight made up of counterions and residual water).

Counter Ion: TFA

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 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:

Lim *et al* (2008) A myristoylated pseudosubstrate peptide of PKC-ζ induces degranulation in HMC-1 cells independently of PKC-ζ activity. Life Sci. ***82*** 733. PMID: 18289606.

Laudanna *et al* (1998) Evidence of ζ protein kinase C involvement in polymorphonuclear neutrophil integrin-dependent adhesion and chemotaxis. J.Biol.Chem ***273*** 30306. PMID: 9804792.

Theodore *et al* (1995) Intraneuronal delivery of protein kinase C pseudosubstrate leads to growth cone collapse. J.Neurosci. ***15*** 7158. PMID: 7472470.

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