

Certificate of Analysis

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Product Name: Calcineurin Autoinhibitory Peptide

Catalog No.: 1891

Batch No.: 6

CAS Number: 148067-21-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₂₄ H ₂₀₅ N ₃₉ O ₃₉ S ₂
Batch Molecular Weight:	2930.34
Physical Appearance:	White lyophilised solid
Net Peptide Content:	73.9%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Ile-Thr-Ser-Phe-Glu-Glu-Ala-Lys-Gly-Leu- Asp-Arg-Ile-Asn-Glu-Arg-Met-Pro-Pro-Arg- Arg-Asp-Ala-Met-Pro

2. ANALYTICAL DATA

HPLC:	Shows 95.4% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	2.00	1.94	Lys	1.00	1.01		
Arg	4.00	4.00	Met	2.00	1.99		
Asx	3.00	3.03	Phe	1.00	1.01		
Cys			Pro	3.00	3.05		
Glx	3.00	3.04	Ser	1.00	0.78		
Gly	1.00	1.02	Thr	1.00	0.76		
His			Trp				
Ile	2.00	1.94	Tyr				
Leu	1.00	0.97	Val				

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

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Product Name: Calcineurin Autoinhibitory Peptide**Catalog No.:** 1891**Batch No.:** 6

CAS Number: 148067-21-4

Description:

Selective inhibitor of Ca²⁺-calmodulin-dependent protein phosphatase (calcineurin) (IC₅₀ ~ 10 μM). Does not inhibit PP1, PP2A or CaM kinase II (IC₅₀ > 100 mM).

Physical and Chemical Properties:Batch Molecular Formula: C₁₂₄H₂₀₅N₃₉O₃₉S₂

Batch Molecular Weight: 2930.34

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ile-Thr-Ser-Phe-Glu-Glu-Ala-Lys-Gly-Leu-
Asp-Arg-Ile-Asn-Glu-Arg-Met-Pro-Pro-Arg-
Arg-Asp-Ala-Met-Pro

Storage: Desiccate at -20°C**Solubility & Usage Info:**

Soluble to 1 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: 73.9% (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 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:

Perrino *et al* (1995) Calcium regulation of calcineurin phosphatase activity by its B subunit and calmodulin. *J.Biol.Chem.* **270** 340. PMID: 7814394.

Yokoyama and Wang (1994) The role of the autoinhibitory domain in differential metal ion activation of calmodulin-stimulated phosphatase. *FEBS Lett.* **337** 128. PMID: 8287965.

Hashimoto *et al* (1990) Identification of an autoinhibitory domain in calcineurin. *J.Biol.Chem.* **265** 1924. PMID: 2153670.

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