

## Certificate of Analysis

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**Product Name:** SAMS Peptide

**Catalog No.:** 1344

**Batch No.:** 7

CAS Number: 125911-68-4

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>74</sub> H <sub>131</sub> N <sub>29</sub> O <sub>18</sub> S <sub>2</sub>
<b>Batch Molecular Weight:</b>	1779.15
<b>Physical Appearance:</b>	White lyophilised solid
<b>Net Peptide Content:</b>	85%
<b>Solubility:</b>	Soluble to 1 mg/ml in water
<b>Storage:</b>	Desiccate at -20°C
<b>Peptide Sequence:</b>	His-Met-Arg-Ser-Ala-Met-Ser-Gly-Leu-His- Leu-Val-Lys-Arg-Arg

### 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows >95% purity
<b>Mass Spectrum:</b>	Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	1.00	1.04	Lys	1.00	1.01
Arg	3.00	2.99	Met	2.00	1.93
Asx			Phe		
Cys			Pro		
Glx			Ser	2.00	1.90
Gly	1.00	1.05	Thr		
His	2.00	1.95	Trp		
Ile			Tyr		
Leu	2.00	2.08	Val	1.00	1.05

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

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**Batch No.: 7**

CAS Number: 125911-68-4

**Description:**

Substrate for AMP-activated protein kinase (AMPK). Phosphorylated rapidly by AMPK, it is more specific for the kinase than acetyl CoA carboxylase itself, and provides a convenient and sensitive assay for AMPK.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>74</sub>H<sub>131</sub>N<sub>29</sub>O<sub>18</sub>S<sub>2</sub>

Batch Molecular Weight: 1779.15

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

His-Met-Arg-Ser-Ala-Met-Ser-Gly-Leu-His-  
Leu-Val-Lys-Arg-Arg

**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:** 85% (Remaining weight made up of counterions and residual water).

**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:**

**Carling *et al*** (1989) Purification and characterization of the AMP-activated protein kinase. *Eur.J.Biochem.* **186** 129. PMID: 2598924.

**Davies *et al*** (1989) Tissue distribution of the AMP-activated protein kinase, and lack of activation by cyclic-AMP-dependent protein kinase, studied using a specific and sensitive peptide assay. *Eur.J.Biochem.* **186** 123. PMID: 2574667.

**Hardie *et al*** (1998) The AMP-activated/SNF1 protein kinase subfamily: metabolic sensors of the eukaryotic cell? *Annu.Rev.Biochem.* **67** 821. PMID: 9759505.

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**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