

Certificate of Analysis

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Product Name: C 21

Catalog No.: 5128

Batch No.: 3

CAS Number: 1229236-78-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₀H₁₆₁ClN₃₆O₂₄
Batch Molecular Weight: 2166.94
Physical Appearance: White lyophilised solid
Net Peptide Content: 64%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Ac-Ser-Gly-[N⁵-(2-Chloro-1-iminoethyl)]-Orn-Gly-Lys-Gly-Gly-Lys-Gly-Leu-Gly-Lys-Gly-Gly-Ala-Lys-Arg-His-Arg-Lys-Val

2. ANALYTICAL DATA

HPLC: Shows 97% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	1.00	1.08	Lys	5.00	5.03
Arg	2.00	2.03	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser	1.00	0.94
Gly	8.00	7.91	Thr		
His	1.00	1.02	Trp		
Ile			Tyr		
Leu	1.00	1.05	Val	1.00	1.02

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

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Product Name: C 21**Catalog No.:** 5128**Batch No.:** 3

CAS Number: 1229236-78-5

Description:

Selective protein arginine methyltransferase 1 (PRMT1) inhibitor ($IC_{50} = 1.8 \mu M$). Exhibits five-fold selectivity for PRMT1 over PRMT6 and >250-fold selectivity over PRMT3 and CARM1.

Physical and Chemical Properties:Batch Molecular Formula: $C_{90}H_{161}ClN_{36}O_{24}$

Batch Molecular Weight: 2166.94

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Ser-Gly-[N^5 -(2-Chloro-1-iminoethyl)]-Orn-
Gly-Lys-Gly-Gly-Lys-Gly-Leu-Gly-Lys-Gly-
Gly-Ala-Lys-Arg-His-Arg-Lys-Val

Storage: Store at $-20^{\circ}C$ **Solubility & Usage Info:**

Soluble to 2 mg/ml in water

This product is supplied as a lyophilised solid and may be very hard to visualise. 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: 64% (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 $45-60^{\circ}C$ water bath).

Peptides in solution are much less stable than in lyophilised 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 $-20^{\circ}C$. 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 $0.2 \mu m$ filter to remove potential bacterial contamination whenever possible.

References:

Obianyo and Thompson (2012) Kinetic mechanism of protein arginine methyltransferase 6 (PRMT6). *J.Biol.Chem.* **287** 6062. PMID: 22219200.

Obianyo et al (2010) A chloroacetamide-based inactivator of protein arginine methyltransferase 1: design, synthesis, and in vitro and in vivo evaluation. *Chembiochem* **11** 1219. PMID: 20480486.

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