

Certificate of Analysis

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Product Name: ATI 2341
CAS Number: 1337878-62-2

Catalog No.: 5795 **Batch No.:** 5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀₄H₁₇₈N₂₆O₂₅S₂
Batch Molecular Weight: 2256.82
Physical Appearance: White lyophilised solid
Net Peptide Content: 75%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Pal-Met-Gly-Tyr-Gln-Lys-Lys-Leu-Arg-Ser-Met-Thr-Asp-Lys-Tyr-Arg-Leu

2. ANALYTICAL DATA

HPLC: Shows 96.5% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	3.00	2.95
Arg	2.00	1.97	Met	2.00	2.00
Asx	1.00	1.00	Phe		
Cys			Pro		
Glx	1.00	1.00	Ser	1.00	1.04
Gly	1.00	1.03	Thr	1.00	1.07
His			Trp		
Ile			Tyr	2.00	2.01
Leu	2.00	1.98	Val		

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

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Product Name: ATI 2341**Catalog No.:** 5795**5**

CAS Number: 1337878-62-2

Description:

ATI 2341 is a CXCR4 allosteric agonist (EC₅₀ = 194 nM). Induces chemotaxis in CXCR4-expressing cells in vitro. Mobilizes polymorphonuclear neutrophils (PMNs) and hematopoietic stem and progenitor cells (HSPCs) from bone marrow niche in vivo. Exhibits biased signaling towards G_i proteins over G₁₃ and β-arrestin.

Physical and Chemical Properties:Batch Molecular Formula: C₁₀₄H₁₇₈N₂₆O₂₅S₂

Batch Molecular Weight: 2256.82

Physical Appearance: White lyophilised solid

Peptide Sequence:**Pal-Met-Gly-Tyr-Gln-Lys-Lys-Leu-Arg-Ser-Met-Thr-Asp-Lys-Tyr-Arg-Leu****Storage:** Store at -20°C**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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: 75% (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:

Planesas et al (2015) Studying the binding interactions of allosteric agonists and antagonists of the CXCR4 receptor. *J.Mol.Graph Model.* **60** 1. PMID: 26080355.

Quoyer et al (2013) Pepducin targeting the C-X-C chemokine receptor type 4 acts as a biased agonist favoring activation of the inhibitory G protein. *Proc.Natl.Acad.Sci.U.S.A.* **110** E5088. PMID: 24309376.

Tchernychev et al (2010) Discovery of a CXCR4 agonist pepducin that mobilizes bone marrow hematopoietic cells. *Proc.Natl.Acad.Sci.U.S.A.* **107** 22255. PMID: 21139054.

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