

Certificate of Analysis

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Product Name: TAT 14

Catalog No.: 4811

Batch No.: 3

CAS Number: 1362661-34-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃₇H₂₃₀N₄₈O₃₉
Batch Molecular Weight: 3173.6
Physical Appearance: White lyophilised solid
Net Peptide Content: 68%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Leu-Gln-Leu-Asp-Glu-Glu-Thr-Gly-Glu-Phe-Leu-Pro-Ile-Gln

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				Lys	2.00		1.96
Arg	6.00		5.81	Met			
Asx	1.00		0.98	Phe	1.00		1.01
Cys				Pro	1.00		1.12
Glx	6.00		6.08	Ser			
Gly	2.00		1.98	Thr	1.00		1.05
His				Trp			
Ile	1.00		1.01	Tyr	1.00		1.00
Leu	3.00		3.00	Val			

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

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CAS Number: 1362661-34-4

Description:

Nrf2 activator; inhibits Nrf2/Keap1 interaction. Induces upregulation of Nrf2 pathway downstream gene expression including heme-oxygenase 1. Suppresses LPS-induced TNF- α expression in THP-1 cells.

Physical and Chemical Properties:

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Peptide Sequence:

Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Leu-Gln-Leu-Asp-Glu-Glu-Thr-Gly-Glu-Phe-Leu-Pro-Ile-Gln

Storage: Store 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: 68% (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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Steel *et al* (2012) Anti-inflammatory effect of a cell-penetrating peptide targeting the Nrf2/Keap1 interaction. ACS Med.Chem.Lett. **3** 407. PMID: 22582137.

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