

Certificate of Analysis

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Product Name: TAT-GluA2 3Y

Catalog No.: 6847

Batch No.: 1

CAS Number: 1404188-93-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₁₅ H ₁₈₅ N ₄₃ O ₂₉
Batch Molecular Weight:	2634
Physical Appearance:	White lyophilised solid
Net Peptide Content:	69%
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-Tyr-Lys-Glu-Gly-Tyr-Asn-Val-Tyr-Gly

2. ANALYTICAL DATA

HPLC:	Shows 99% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	3.00	2.93
Arg	6.00	5.82	Met		
Asx	1.00	1.02	Phe		
Cys			Pro		
Glx	2.00	1.99	Ser		
Gly	3.00	2.99	Thr		
His			Trp		
Ile			Tyr	4.00	4.10
Leu			Val	1.00	0.97

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

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Batch No.: 1

CAS Number: 1404188-93-7

Description:

TAT-GluA2 3Y is an inhibitor of AMPA receptor endocytosis. Induces increased hind paw withdrawal latencies following thermal and mechanical stimuli in rats. Also exhibits antinociceptive effects in a rat model of neuropathic pain. Rescues pentobarbital-induced memory retrieval deficits in a rat model of learning and memory.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₁₅H₁₈₅N₄₃O₂₉

Batch Molecular Weight: 2634

Physical Appearance: White lyophilised solid

Peptide Sequence:

Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Tyr-Lys-Glu-Gly-Tyr-Asn-Val-Tyr-Gly

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: 69% (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:

Wang et al (2018) Inhibition of AMPAR endocytosis alleviates pentobarbital-induced spatial memory deficits and synaptic depression. *Behav. Brain Res.* **339** 66. PMID: 29162383.

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