

## Certificate of Analysis

**Product Name:** AR-M 1896

**Catalog No.:** 2699

**Batch No.:** 3

CAS Number: 367518-31-8

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>54</sub> H <sub>81</sub> N <sub>13</sub> O <sub>14</sub>
<b>Batch Molecular Weight:</b>	1136.31
<b>Physical Appearance:</b>	White lyophilised solid
<b>Net Peptide Content:</b>	88.4%
<b>Counter Ion:</b>	TFA
<b>Solubility:</b>	Soluble to 1 mg/ml in 20% formic acid
<b>Storage:</b>	Desiccate at -20°C
<b>Peptide Sequence:</b>	Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-NH <sub>2</sub>

### 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 95.5% purity
<b>Mass Spectrum:</b>	Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	1.00	0.96	Lys				
Arg			Met				
Asx	1.00	1.06	Phe				
Cys			Pro				
Glx			Ser	1.00	0.92		
Gly	1.00	1.15	Thr	1.00	1.07		
His			Trp	1.00	Detected		
Ile			Tyr	1.00	1.03		
Leu	3.00	3.00	Val				

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

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**Description:**

Selective galanin GAL<sub>2</sub> receptor agonist (IC<sub>50</sub> values are 1.76 and 879 nM for GAL<sub>2</sub> and GAL<sub>1</sub> respectively). Also shows moderate affinity for GAL<sub>3</sub> receptors (K<sub>i</sub> values are 88 and 271 nM for GAL<sub>2</sub> and GAL<sub>3</sub> respectively). Antiepileptogenic agent; prevents full seizures and postkindling increases in hippocampal excitability.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>54</sub>H<sub>81</sub>N<sub>13</sub>O<sub>14</sub>

Batch Molecular Weight: 1136.31

Physical Appearance: White lyophilised solid

**Peptide Sequence:**Trp-Thr-Leu-Asn-Ser-Ala-Gly-Tyr-Leu-Leu-NH<sub>2</sub>**Storage:** Desiccate at -20°C**Solubility & Usage Info:**

Soluble to 1 mg/ml in 20% formic acid

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:** 88.4% (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:**

Liu *et al* (2001) Receptor subtype-specific pronociceptive and analgesic actions of galanin in the spinal cord: selective actions via GalR1 and GalR2 receptors. *Proc.Natl.Acad.Sci USA* **98** 9960.

Lu *et al* (2005) Galanin (2-11) binds to GalR3 in transfected cell lines: limitations for pharmacological definition of receptor subtypes. *Neuropeptides* **39** 165. PMID: 15944007.

Mazarati *et al* (2006) Regulation of kindling epileptogenesis by hippocampal galanin type 1 and type 2 receptors: the effects of subtype-selective agonists and the role of G-protein-mediated signaling. *J.Pharmacol.Exp.Ther.* **318** 700. PMID: 16699066.

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