

## Certificate of Analysis

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**Product Name:** Ac-RYYRWK-NH<sub>2</sub>

**Catalog No.:** 1387

**Batch No.:** 2

**CAS Number:** 200959-47-3

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>49</sub>H<sub>69</sub>N<sub>15</sub>O<sub>9</sub>  
**Batch Molecular Weight:** 1012.17  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 80%  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** Ac-Arg-Tyr-Tyr-Arg-Trp-Lys-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows >95% purity

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	1.00	0.96
Arg	2.00	2.05	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser		
Gly			Thr		
His			Trp	1.00	
Ile			Tyr	2.00	1.85
Leu			Val		

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## Product Information

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**Product Name:** Ac-RYYRWK-NH<sub>2</sub>

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### Description:

Potent, selective partial agonist peptide for the NOP receptor ( $K_i$  = 0.71 nM). Selective over  $\mu$ ,  $\delta$  and  $\kappa$  opioid receptors ( $IC_{50}$  > 4000 nM). Increases food intake in vivo.

### Physical and Chemical Properties:

Batch Molecular Formula: C<sub>49</sub>H<sub>69</sub>N<sub>15</sub>O<sub>9</sub>

Batch Molecular Weight: 1012.17

Physical Appearance: White lyophilised solid

### Peptide Sequence:

Ac-Arg-Tyr-Tyr-Arg-Trp-Lys-NH<sub>2</sub>

**Storage:** Desiccate 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:** 80% (Remaining weight made up of counterions and residual water).

### 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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

### References:

**Dooley et al** (1997) Binding and *in vitro* activities of peptides with high affinity for the nociceptin/orphanin FQ receptor, ORL<sub>1</sub>. J.Pharmacol.Exp.Ther. **283** 735. PMID: 9353393.

**Ho et al** (2000) Characterization of the ORL<sub>1</sub> receptor on adrenergic nerve in the rat anococcygeus. Br.J.Pharmacol. **131** 349. PMID: 10991930.

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