1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: $\text{C}_{61}\text{H}_{100}\text{N}_{22}\text{O}_{15}$
   Batch Molecular Weight: 1381.6
   Physical Appearance: White lyophilised solid
   Net Peptide Content: 66%
   Counter Ion: TFA
   Solubility: Soluble to 0.67 mg/ml in 20% acetonitrile
   Storage: Desiccate at -20°C
   Peptide Sequence: Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-NH$_2$

2. ANALYTICAL DATA

   HPLC: Shows 95% purity
   Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>Theoretical</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ala</td>
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<td>1.96</td>
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<tr>
<td>Arg</td>
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<td>2.22</td>
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<td>Phe</td>
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<tr>
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<td>Tyr</td>
</tr>
<tr>
<td>Leu</td>
<td></td>
<td>Val</td>
</tr>
</tbody>
</table>

   Amino Acid Theoretical Actual
   Ala 2.00 1.96 Lys 2.00 1.99
   Arg 2.00 2.22 Met
   Asx Phe 2.00 1.96
   Cys Pro
   Glx Ser 1.00 0.98
   Gly 3.00 2.96 Thr 1.00 0.93
   His Trp
   Ile Tyr
   Leu Val
Product Information

Product Name: Nociceptin (1-13)NH₂
CAS Number: 178064-02-3

Description:
Bioactive metabolite of nociceptin and potent agonist for the ORL₁ receptor (pEC₉₀ = 7.9 in mouse vas deferens, Kᵢ = 0.75 nM for binding to rat forebrain membranes).

Physical and Chemical Properties:
Batch Molecular Formula: C₁₀₁H₁₀₀N₂₂O₁₅
Batch Molecular Weight: 1381.6
Physical Appearance: White lyophilised solid

Peptide Sequence:
Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:
Soluble to 0.67 mg/ml in 20% acetonitrile
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: 66% (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 wate bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such 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: