1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{130}\text{H}_{184}\text{N}_{38}\text{O}_{31}\text{S}_{2} \)

Batch Molecular Weight: 2839.24

Physical Appearance: White lyophilised solid

Net Peptide Content: 80%

Solubility: Soluble to 1 mg/ml in water

Storage: Desiccate at -20°C


2. ANALYTICAL DATA

HPLC: Shows >95% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

<table>
<thead>
<tr>
<th>Amino Acid Theoretical</th>
<th>Amino Acid Theoretical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ala 1.00</td>
<td>Lys 1.01</td>
</tr>
<tr>
<td>Arg 4.00</td>
<td>Met 2.00</td>
</tr>
<tr>
<td>Asx 1.00</td>
<td>Phe 1.00</td>
</tr>
<tr>
<td>Cys 1.00</td>
<td>Pro 1.00</td>
</tr>
<tr>
<td>Glx 2.00</td>
<td>Ser 2.01</td>
</tr>
<tr>
<td>Gly 4.00</td>
<td>Thr 3.98</td>
</tr>
<tr>
<td>His 1.00</td>
<td>Trp 2.00</td>
</tr>
<tr>
<td>Ile 3.00</td>
<td>Tyr 3.06</td>
</tr>
<tr>
<td>Leu 1.00</td>
<td>Val 0.87</td>
</tr>
</tbody>
</table>
Description:
Potent endogenous agonist peptide for Mas-related G protein-coupled receptor X1 (MRGPRX1); isolated from bovine adrenal medulla (EC\textsubscript{50} values are 16 - 800 nM) Also potent opioid agonist (IC\textsubscript{50} = 1.3 nM in guinea pig ileum preparation). Produces opioid- and non-opioid receptor mediated antinociceptive effects in vivo.

Physical and Chemical Properties:
Batch Molecular Formula: C\textsubscript{130}H\textsubscript{164}N\textsubscript{38}O\textsubscript{21}S\textsubscript{2}
Batch Molecular Weight: 2839.24
Physical Appearance: White lyophilised solid

Peptide Sequence:

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 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: