Print Date: Oct 10th 2019

Certificate of Analysis

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Product Name: **PHM 27 (human)** **Catalog No.: 2080** **Batch No.: 1**

CAS Number: 87403-73-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{135}H_{214}N_{34}O_{40}S$
Batch Molecular Weight:	2985.44
Physical Appearance:	White lyophilised solid
Net Peptide Content:	88%
Solubility:	Soluble to 1 mg/ml in 5% acetonitrile / water
Storage:	Desiccate at -20°C
Peptide Sequence:	His-Ala-Asp-Gly-Val-Phe-Thr-Ser-Asp-Phe-Ser-Lys-Leu-Leu-Gly-Gln-Leu-Ser-Ala-Lys-Lys-Tyr-Leu-Glu-Ser-Leu-Met-NH_2

2. ANALYTICAL DATA

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

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Product Name: **PHM 27 (human)** **Catalog No.: 2080** **Batch No.: 1**

CAS Number: 87403-73-4

Description:

Endogenous peptide product of human prepro-VIP and analog of porcine PHI-27; potent agonist for the human calcitonin receptor (EC_{50} = 11 nM). Transgenic mice expressing the human VIP/PHM 27 gene in pancreatic β-islets display enhanced glucose-induced insulin secretion.

Physical and Chemical Properties:

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His-Ala-Asp-Gly-Val-Phe-Thr-Ser-Asp-Phe-Ser-Lys-Leu-Leu-Gly-Gln-Leu-Ser-Ala-Lys-Lys-Tyr-Leu-Glu-Ser-Leu-Met-NH_2

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 5% acetonitrile / 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: 88% (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:

Ma *et al* (2004) Discovery of novel peptide/receptor interactions: identification of PHM-27 as a potent agonist of the human calcitonin receptor. Biochem.Pharmacol. ***67*** 1279. PMID: 15013843.

Kato *et al* (1994) Transgenic mice overexpressing human vasoactive intestinal peptide (VIP) gene in pancreatic β cells. J.Biol.Chem. ***269*** 21223. PMID: 8063743.

Itoh *et al* (1983) Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like peptide, PHM-27. Nature ***304*** 547. PMID: 6571696.