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Certificate of Analysis

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Product Name: **VIP (guinea pig)** **Catalog No.: 1182** **Batch No.: 5**
CAS Number: 96886-24-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{147}H_{239}N_{43}O_{42}S_2$
Batch Molecular Weight: 3346
Physical Appearance: White lyophilised solid
Net Peptide Content: 79%
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence:

His-Ser-Asp-Ala-Leu-Phe-Thr-Asp-Thr-
Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Met-Ala-Met-
Lys-Lys-Tyr-Leu-Asn-Ser-Val-Leu-Asn-
NH_2

2. ANALYTICAL DATA

HPLC: Shows >95% purity

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	2.00	1.99	Lys	3.00	3.04
Arg	2.00	2.06	Met	2.00	2.15
Asx	4.00	3.99	Phe	1.00	0.98
Cys			Pro		
Glx	1.00	1.01	Ser	2.00	1.98
Gly			Thr	3.00	2.92
His	1.00	1.06	Trp		
Ile			Tyr	2.00	2.14
Leu	4.00	3.85	Val	1.00	1.01

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CAS Number: 96886-24-7

Description:

Neuropeptide with many biological actions; plays a role in neurotransmission, smooth muscle relaxation and has trophic and mitogenic actions.

Physical and Chemical Properties:

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Lys-Lys-Tyr-Leu-Asn-Ser-Val-Leu-Asn-
NH_2

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: 79% (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:

Fahrenkrug (1993) Transmitter role of vasoactive intestinal peptide. Pharmacol.Toxicol. ***72*** 354. PMID: 8103215.

Gressens *et al* (1998) Vasoactive intestinal peptide shortens both G1 and S phases of neural cell cycle in whole postimplantation cultured mouse embryos. Eur.J.Neurosci. ***10*** 1734. PMID: 9751145.

Motomura *et al* (1998) Interactive mechanisms among pituitary adenylate cyclase-activating peptide, vasoactive intestinal peptide, and parathyroid hormone receptors in guinea pig cecal circular smooth muscle cells. Endocrinology ***139*** 2869. PMID: 9607796.