

Certificate of Analysis

www.tocris.com

Product Name: PACAP 1-38

Catalog No.: 1186

Batch No.: 21

CAS Number: 137061-48-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₀₃ H ₃₃₁ N ₆₃ O ₅₃ S
Batch Molecular Weight:	4535
Physical Appearance:	White lyophilised solid
Counter Ion:	TFA
Solubility:	Soluble to 0.90 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	His-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr- Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys- Lys-Tyr-Leu-Ala-Ala-Val-Leu-Gly-Lys-Arg- Tyr-Lys-Gln-Arg-Val-Lys-Asn-Lys-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows 95.0% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	3.00	2.91	Lys	7.00	7.08
Arg	4.00	4.03	Met	1.00	1.01
Asx	3.00	3.03	Phe	1.00	1.00
Cys			Pro		
Glx	2.00	2.03	Ser	3.00	2.13
Gly	2.00	2.08	Thr	1.00	0.86
His	1.00	1.01	Trp		
Ile	1.00	0.98	Tyr	4.00	3.94
Leu	2.00	2.01	Val	3.00	2.89

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

Product Name: PACAP 1-38

Catalog No.: 1186

21

CAS Number: 137061-48-4

Description:

PACAP 1-38 is a potent endogenous neuropeptide (IC₅₀ = 2 nM) showing considerable homology with vasoactive intestinal peptide (VIP) but with a greater potency for stimulation of adenylyl cyclase. PACAP 1-38 induces phosphorylation of NR2B and enhances NMDA receptor potentials.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₀₃H₃₃₁N₆₃O₅₃S

Batch Molecular Weight: 4535

Physical Appearance: White lyophilised solid

Peptide Sequence:

His-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr-
Ser-Arg-Tyr-Arg-Lys-Gln-Met-Ala-Val-Lys-
Lys-Tyr-Leu-Ala-Ala-Val-Leu-Gly-Lys-Arg-
Tyr-Lys-Gln-Arg-Val-Lys-Asn-Lys-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.90 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.

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 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 µm filter to remove potential bacterial contamination whenever possible.

References:

Yaka et al (2003) Pituitary adenylate cyclase-activating polypeptide (PACAP(1-38)) enhances N-methyl-D-aspartate receptor function and brain-derived neurotrophic factor expression via RACK1. *J.Biol.Chem.* **278** 9630. PMID: 12524444.

Lazarovici et al (1998) The 38-amino-acid form of pituitary adenylate cyclase-activating polypeptide induces neurite outgrowth in PC12 cells that is dependent on protein kinase C and extracellular signal-regulated kinase but not on protein kinase A, nerve growth factor receptor *Mol.Pharmacol.* **54** 547. PMID: 9730914.

Michel et al (1998) XVI. International Union of Pharmacology recommendations for the nomenclature of neuropeptide Y, peptide YY, and pancreatic polypeptide receptors. *Pharmacol.Rev.* **50** 143. PMID: 9549761.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956