

Certificate of Analysis

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Product Name: GRP (porcine)

Catalog No.: 1788

Batch No.: 6

CAS Number: 74815-57-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂₆H₁₉₈N₃₈O₃₁S₂
Batch Molecular Weight: 2805.31
Physical Appearance: White lyophilised solid
Net Peptide Content: 83%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Ala-Pro-Val-Ser-Val-Gly-Gly-Gly-Thr-Val-
 Leu-Ala-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-
 Trp-Ala-Val-Gly-His-Leu-Met-NH₂

2. ANALYTICAL DATA

HPLC: Shows 96% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	3.00	2.82	Lys	1.00	1.01
Arg	1.00	1.07	Met	2.00	1.97
Asx	1.00	1.01	Phe		
Cys			Pro	2.00	1.99
Glx			Ser	1.00	0.96
Gly	5.00	4.95	Thr	1.00	1.02
His	2.00	2.02	Trp	1.00	Detected
Ile			Tyr	1.00	1.03
Leu	2.00	2.05	Val	4.00	4.00

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

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CAS Number: 74815-57-9

Description:

Mammalian bombesin-like peptide neurotransmitter that is an agonist for the gastrin-releasing peptide receptor (GRPR). GRP has been reported to activate GABAergic interneurons in the amygdala leading to increased GABA release and fear suppression in mice in vivo. Also involved in mitogenesis, and GI tract and appetite regulation.

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Peptide Sequence:

Ala-Pro-Val-Ser-Val-Gly-Gly-Gly-Thr-Val-
Leu-Ala-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-
Trp-Ala-Val-Gly-His-Leu-Met-NH₂

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: 83% (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 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:**Dudai** (2003) Neurobiology: Fear thou not. *Nature* **421** 325. PMID: 12540884.**Shumyatsky et al** (2002) Identification of a signaling network in lateral nucleus of amygdala important for inhibiting memory specifically related to learned fear. *Cell* **111** 905. PMID: 12526815.**Woodruff et al** (1996) Bombesin receptors in the brain. *Ann.N.Y.Acad.Sci.* **780** 223. PMID: 8602736.

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