

Certificate of Analysis

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Product Name: [D-Phe¹²,Leu¹⁴]-Bombesin

Catalog No.: 3422

Batch No.: 1

CAS Number: 108437-88-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₇₅ H ₁₁₄ N ₂₂ O ₁₈
Batch Molecular Weight:	1610.9
Physical Appearance:	White lyophilised solid
Net Peptide Content:	84%
Counter Ion:	Trifluoroacetate
Solubility:	Soluble to 10 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Glp-Gln-Arg-Leu-Gly-Asn-Gln-Trp-Ala-Val- Gly-D-Phe-Leu-Leu-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows 95.64% purity
Mass Spectrum:	Consistent with structure

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

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CAS Number: 108437-88-3

Description:

Bombesin receptor antagonist that inhibits bombesin binding to rat brain with an IC₅₀ value of 2 μM. Inhibits amylase release in vitro (IC₅₀ = 4 μM) and attenuates bombesin-mediated suppression of food intake in vivo.

Physical and Chemical Properties:Batch Molecular Formula: C₇₅H₁₁₄N₂₂O₁₈

Batch Molecular Weight: 1610.9

Physical Appearance: White lyophilised solid

Peptide Sequence:

Glp-Gln-Arg-Leu-Gly-Asn-Gln-Trp-Ala-Val-
Gly-D-Phe-Leu-Leu-NH₂

Storage: Store at -20°C**Solubility & Usage Info:**

Soluble to 10 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: 84% (Remaining weight made up of counterions and residual water).**Counter Ion:** Trifluoroacetate**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:

Heinz-Erian *et al* (1987) [d-Phe¹²]bombesin analogues: a new class of bombesin receptor antagonists. *Am.J.Physiol.* **252** G439. PMID: 2435173.

Merali *et al* (1988) (d-Phe¹²) bombesin and substance P analogues function as central bombesin receptor antagonists. *Synapse* **2** 282. PMID: 2463692.

Flynn (1997) Bombesin receptor antagonists block the effects of exogenous bombesin but not of nutrients on food intake. *Physiol.Behav.* **62** 791. PMID: 9284499.

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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