

## Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

**Product Name:** BA 1  
**CAS Number:** 183241-31-8

**Catalog No.:** 5600 **Batch No.:** 1

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>57</sub>H<sub>76</sub>N<sub>14</sub>O<sub>11</sub>  
**Batch Molecular Weight:** 1133.32  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 73%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 2 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** D-Tyr-Gln-Trp-Ala-Val-β-Ala-His-Phe-Ile-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows 98% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	1.00	1.97	Lys		
Arg			Met		
Asx			Phe	1.00	1.02
Cys			Pro		
Glx	1.00	0.99	Ser		
Gly			Thr		
His	1.00	1.01	Trp		
Ile			Tyr	1.00	1.04
Leu			Val	1.00	0.98

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

**bio-techne.com**  
[info@bio-techne.com](mailto:info@bio-techne.com)  
[techsupport@bio-techne.com](mailto:techsupport@bio-techne.com)

**North America**  
 Tel: (800) 343 7475

**China**  
[info.cn@bio-techne.com](mailto: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](http://www.tocris.com/distributors)  
 Tel: +1 612 379 2956

**Product Name:** BA 1  
CAS Number: 183241-31-8

**Catalog No.:** 5600 **Batch No.:** 1

**Description:**

Potent bombesin receptor subtype 3 (BRS-3; BB<sub>3</sub>) agonist (IC<sub>50</sub> = 2.52 nM). Also GRPR (BB<sub>1</sub>) and NMBR (BB<sub>2</sub>) agonist (IC<sub>50</sub> values are 0.26 and 1.55 nM respectively). Enhances glucose transport in obese and diabetic primary myocytes. Also stimulates NCI-H1299 lung cancer cell proliferation in vitro.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>57</sub>H<sub>76</sub>N<sub>14</sub>O<sub>11</sub>  
Batch Molecular Weight: 1133.32  
Physical Appearance: White lyophilised solid

**Peptide Sequence:**

**D-Tyr-Gln-Trp-Ala-Val-β-Ala-His-Phe-Nle-NH<sub>2</sub>**

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 2 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:** 73% (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:**

**Moreno *et al*** (2013) Comparative pharmacology of bombesin receptor subtype-3, nonpeptide agonist MK-5046, a universal peptide agonist, and peptide antagonist Bantag-1 for human bombesin receptors. *J.Pharmacol.Exp.Ther.* **347** 100. PMID: 23892571.

**González *et al*** (2015) Effect of bombesin receptor subtype-3 and its synthetic agonist on signaling, glucose transport and metabolism in myocytes from patients with obesity and type 2 diabetes *Int.J.Mol.Med.* **35** 925. PMID: 25653074.

**Moody *et al*** (2015) ML-18 is a non-peptide bombesin receptor subtype-3 antagonist which inhibits lung cancer growth. *Peptides* **64** 55. PMID: 25554218.

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