

Certificate of Analysis

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Product Name: Bay 55-9837

Catalog No.: 2711

Batch No.: 9

CAS Number: 463930-25-8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₆₇ H ₂₇₀ N ₅₂ O ₄₆
Batch Molecular Weight:	3742.29
Physical Appearance:	White lyophilised solid
Counter Ion:	TFA
Solubility:	Soluble to 2 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	His-Ser-Asp-Ala-Val-Phe-Thr-Asp-Asn-Tyr- Thr-Arg-Leu-Arg-Lys-Gln-Val-Ala-Ala-Lys- Lys-Tyr-Leu-Gln-Ser-Ile-Lys-Asn-Lys-Arg- Tyr-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows 98.1% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	3.00	2.96	Lys	5.00	5.05
Arg	3.00	3.02	Met		
Asx	4.00	3.97	Phe	1.00	0.98
Cys			Pro		
Glx	2.00	2.02	Ser	2.00	2.00
Gly			Thr	2.00	1.81
His	1.00	0.99	Trp		
Ile	1.00	1.29	Tyr	3.00	3.04
Leu	2.00	1.98	Val	2.00	1.96

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

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CAS Number: 463930-25-8

Description:

Bay 55-9837 is a selective VPAC₂ receptor agonist (EC₅₀ values are 0.4, 100 and >1000 nM for VPAC₂, VPAC₁ and PAC₁, respectively in a cAMP accumulation assay; IC₅₀ values are 60, 8700 and >10000 nM for VPAC₂, VPAC₁ and PAC₁, respectively in a competition binding assay). Stimulates glucose-dependent insulin secretion in isolated human pancreatic islets. Reduces HIV-1 viral replication and shows cooperative effects when given in conjunction with VPAC₁ agonists.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₆₇H₂₇₀N₅₂O₄₆

Batch Molecular Weight: 3742.29

Physical Appearance: White lyophilised solid

Peptide Sequence:

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

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.

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:

Temerzo *et al* (2013) Macrophage resistance to HIV-1 infection is enhanced by the neuropeptides VIP and PACAP. *PLoS ONE* **8** (6) 67701. PMID: 23818986.

Pan *et al* (2007) Engineering novel VPAC2-selective agonists with improved stability and glucose-lowering activity in vivo. *J.Pharmacol.Exp.Ther.* **320** 900. PMID: 17110523.

Clairmont *et al* (2006) Engineering of a VPAC2 receptor peptide agonist to impart dipeptidyl peptidase IV stability and enhance in vivo glucose disposal. *J.Med.Chem.* **49** 7545. PMID: 17149884.

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