

Certificate of Analysis

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Product Name: BAM (8-22)

Catalog No.: 1763

Batch No.: 19

CAS Number: 412961-36-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₁H₁₂₇N₂₅O₂₃S
Batch Molecular Weight: 1971.22
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Val-Gly-Arg-Pro-Glu-Trp-Trp-Met-Asp-Tyr-
Gln-Lys-Arg-Tyr-Gly

2. ANALYTICAL DATA

HPLC: Shows 97.8% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	1.00	1.00
Arg	2.00	2.08	Met	1.00	0.96
Asx	1.00	0.99	Phe		
Cys			Pro	1.00	1.01
Glx	2.00	1.94	Ser		
Gly	2.00	1.99	Thr		
His			Trp	2.00	Not Detected
Ile			Tyr	2.00	1.94
Leu			Val	1.00	0.98

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

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Description:

BAM (8-22) is an endogenous peptide fragment that is a potent agonist for MRGPRX1 (EC₅₀ values are 8 - 150 nM). It was first isolated from bovine adrenal medulla. Unlike BAM 22P (Cat. No. 1650), BAM (8-22) does not contain the met-enkephalin motif therefore displays no affinity for opioid receptors. BAM (8-22) augments scratching behavior in a cholestatic pruritus mice model. BAM (8-22) attenuates bone cancer pain in mice.

Physical and Chemical Properties:

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Batch Molecular Weight: 1971.22

Physical Appearance: White lyophilised solid

Peptide Sequence:

Val-Gly-Arg-Pro-Glu-Trp-Trp-Met-Asp-Tyr-
Gln-Lys-Arg-Tyr-Gly

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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:

Sanjel et al (2019) BAM8-22 and its receptor MRGPRX1 may attribute to cholestatic pruritus. *Sci.Rep.* **9** 10888. PMID: 31350433.

Sun et al (2016) Activation of spinal MrgC-Gi-NR2B-nNOS signaling pathway by Mas oncogene-related gene C receptor agonist bovine adrenal medulla 8-22 attenuates bone cancer pain in mice. *Am.J.Transl.Res.* **8** 1144. PMID: 27158400.

Solinski et al (2014) Pharmacology and signaling of MAS-related G protein-coupled receptors. *Pharmacol.Rev* **66** 570. PMID: 24867890.

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