

Certificate of Analysis

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Product Name: WKYMMv
CAS Number: 187986-17-0

Catalog No.: 1800 **Batch No.:** 13

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₁H₆₁N₉O₇S₂
Batch Molecular Weight: 856.11
Physical Appearance: White lyophilised solid
Net Peptide Content: 69%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Trp-Lys-Tyr-Met-Val-D-Met-NH₂

2. ANALYTICAL DATA

HPLC: Shows 97.6% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	
Ala	Lys	1.00	0.99
Arg	Met	2.00	1.96
Asx	Phe		
Cys	Pro		
Glx	Ser		
Gly	Thr		
His	Trp	1.00	Detected
Ile	Tyr	1.00	0.98
Leu	Val	1.00	1.08

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

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CAS Number: 187986-17-0

Description:

WKYMMv is a selective agonist for the formyl peptide receptors FPR1, FPR2 (EC₅₀ = 75 pM) and FPR3 (EC₅₀ = 3 nM), expressed on immune cells. Induces Ca²⁺ mobilization and superoxide production in, and chemotactic migration of, monocytes and neutrophils. Also promotes monocyte survival through a PKC-, PI 3-kinase- and Akt-dependent pathway.

Physical and Chemical Properties:

Batch Molecular Formula: C₄₁H₆₁N₉O₇S₂

Batch Molecular Weight: 856.11

Physical Appearance: White lyophilised solid

Peptide Sequence:

Trp-Lys-Tyr-Met-Val-D-Met-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.

Net Peptide Content: 69% (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:

Bae et al (2002) The synthetic chemoattractant peptide, Trp-Lys-Tyr-Met-Val-D-Met, enhances monocyte survival via PKC-dependent Akt activation. *J.Leukoc.Biol.* **71** 329. PMID: 11818455.

Christophe et al (2001) The synthetic peptide Trp-Lys-Tyr-Met-Val-Met-NH₂ specifically activates neutrophils through FPRL1/Lipoxin A4 receptors and is an agonist for the orphan monocyte-expressed chemoattractant receptor FPRL2. *J.Biol.Chem.* **276** 21585. PMID: 11285256.

Le et al (1999) Utilization of two seven-transmembrane, G protein-coupled receptors, formyl peptide receptor-like 1 and formyl peptide receptor, by the synthetic hexapeptide WKYMMv for human phagocyte activation. *J.Immunol.* **163** 6777. PMID: 10586077.

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