

Certificate of Analysis

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Product Name: MMK 1
CAS Number: 271246-66-3

Catalog No.: 3537 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₅H₁₂₃N₁₉O₁₈S
Batch Molecular Weight: 1610.97
Physical Appearance: White lyophilised solid
Net Peptide Content: 70%
Counter Ion: TFA
Solubility: Soluble to 0.50 mg/ml in 25% ethanol / water
Storage: Store at -20°C
Peptide Sequence: Leu-Glu-Ser-Ile-Phe-Arg-Ser-Leu-Leu-Phe-Arg-Val-Met

2. ANALYTICAL DATA

HPLC: Shows 98.3% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg	2.00	2.02	Met	1.00	1.04
Asx			Phe	2.00	1.98
Cys			Pro		
Glx	1.00	0.99	Ser	2.00	2.02
Gly			Thr		
His			Trp		
Ile	1.00	0.99	Tyr		
Leu	3.00	3.11	Val	1.00	1.01

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

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Description:

Potent and selective human formyl peptide receptor FPR2 agonist (EC₅₀ values are 1, 2 and > 10 000 nM at mFRP2, hFPR2 and hFPR1 respectively). Induces migration of human monocytes and neutrophils via a chemotactic mechanism and enhances production of proinflammatory cytokines IL-1β and IL-6. Also activates the neutrophil superoxide-generating NADPH-oxidase. DMSO is not recommended as a solvent for this peptide.

Physical and Chemical Properties:

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Batch Molecular Weight: 1610.97

Physical Appearance: White lyophilised solid

Peptide Sequence:

Leu-Glu-Ser-Ile-Phe-Arg-Ser-Leu-Leu-Phe-
Arg-Val-Met

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.50 mg/ml in 25% ethanol / 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.

DMSO is not recommended as a solvent for this peptide.

Net Peptide Content: 70% (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:

Hu et al (2001) Synthetic peptide MMK-1 is a highly specific chemotactic agonist for leukocyte FPRL1. *J.Leukoc.Biol.* **70** 155. PMID: 11435499.

Klein et al (1998) Identification of surrogate agonists for the human FPRL-1 receptor by autocrine selection in yeast. *Nature Biotech.* **16** 1334.

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