

# Certificate of Analysis

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

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

**Catalog No.:** 3537      **Batch No.:** 7

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>75</sub>H<sub>123</sub>N<sub>19</sub>O<sub>18</sub>S  
**Batch Molecular Weight:** 1610.97  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 0.50 mg/ml in 25% ethanol / water with sonication  
**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 98.0% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg	2.00	1.95		Met	1.00	1.05	
Asx				Phe	2.00	1.96	
Cys				Pro			
Glx	1.00	1.03		Ser	2.00	1.99	
Gly				Thr			
His				Trp			
Ile	1.00	0.92		Tyr			
Leu	3.00	3.06		Val	1.00	0.97	

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](http://www.tocris.com/distributors)  
Tel: +1 612 379 2956

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

**Catalog No.:** 3537      **Batch No.:** 7

**Description:**

MMK 1 is a potent and selective human formyl peptide receptor FPR2 agonist (EC<sub>50</sub> 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:**

Batch Molecular Formula: C<sub>75</sub>H<sub>123</sub>N<sub>19</sub>O<sub>18</sub>S  
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 with sonication  
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.*

**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.

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