

# Certificate of Analysis

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

**Product Name:** Pam3CSK4

**Catalog No.:** 4633

**Batch No.:** 13

**CAS Number:** 112208-00-1

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>81</sub>H<sub>156</sub>N<sub>10</sub>O<sub>13</sub>S  
**Batch Molecular Weight:** 1510.24  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in 50% Ethanol / water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Pam-Cys(Pam<sub>2</sub>)-Ser-Lys-Lys-Lys-Lys

## 2. ANALYTICAL DATA

**HPLC:** Shows 97.7% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual	
Ala			Lys	4.00 4.01
Arg			Met	
Asx			Phe	
Cys	1.00	Not Detected	Pro	
Glx			Ser	1.00 0.99
Gly			Thr	
His			Trp	
Ile			Tyr	
Leu			Val	

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

**bio·techne.com**  
[info@bio-techne.com](mailto:info@bio-techne.com)  
[techsupport@bio-techne.com](mailto:techsupport@bio-techne.com)

**North America**  
 Tel: (800) 343 7475

**China**  
[info.cn@bio-techne.com](mailto: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:** Pam3CSK4

**Catalog No.:** 4633

**Batch No.:** 13

CAS Number: 112208-00-1

**Description:**

Pam3CSK4 is a toll-like receptor 1/2 (TLR1/2) agonist; induces production of TNF- $\alpha$  and IL-6 in macrophages. Stimulates phosphorylation of p100/p110 and p60 in granulocytic-differentiated HL-60 cells. Promotes differentiation of naive CD4<sup>+</sup> T cells into T<sub>H</sub>17 cells.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>81</sub>H<sub>156</sub>N<sub>10</sub>O<sub>13</sub>S

Batch Molecular Weight: 1510.24

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Pam-Cys(Pam<sub>2</sub>)-Ser-Lys-Lys-Lys-Lys

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in 50% Ethanol / 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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

**References:**

**Caproni et al** (2012) MF59 and Pam3CSK4 boost adaptive responses to influenza subunit vaccine through an IFN type I-independent mechanism of action. *J. Immunol.* **188** 3088. PMID: 22351935.

**St Paul et al** (2012) Toll-like receptor ligands induce the expression of IFN- $\gamma$  and interleukin-17 in chicken CD4<sup>+</sup> T cells. *BMC Res. Notes* **1** 616. PMID: 23116495.

**Offermanns et al** (1992) Lipopeptides are effective stimulators of tyrosine phosphorylation in human myeloid cells. *Biochem. J.* **282** 551. PMID: 1312332.

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