

**Product Name:** Pam3CSK4

**Catalog No.:** 4633

**Batch No.:** 4

CAS Number: 112208-00-1

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:**  $C_{81}H_{156}N_{10}O_{13}S$   
**Batch Molecular Weight:** 1510.24  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 58%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in 50% Ethanol / water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Pam<sub>3</sub>-Cys-Ser-Lys-Lys-Lys-Lys

**2. ANALYTICAL DATA**

**HPLC:** Shows 95% purity  
**Mass Spectrum:** Consistent with structure

**3. AMINO ACID ANALYSIS DATA**

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	4.00	3.98
Arg			Met		
Asx			Phe		
Cys			Pro		
Glx			Ser	1.00	1.02
Gly			Thr		
His			Trp		
Ile			Tyr		
Leu			Val		

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**Description:**

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:**

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Batch Molecular Weight: 1510.24

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Pam<sub>3</sub>-Cys-Ser-Lys-Lys-Lys-Lys

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in 50% Ethanol / water

**Net Peptide Content:** 58% (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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

**References:**

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

**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 interferon-gamma and interleukin-17 in chicken CD4<sup>+</sup> T cells. *BMC Res.Notes* **1** 616. PMID: 23116495.

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