

PRODUCT INFORMATION



Pam₂CSK₄ (trifluoroacetate salt) Item No. 33338

Formal Name: S-[(2R)-2,3-bis[(1-oxohexadecyl)oxy]propyl]-L-cysteiny-L-seryl-L-lysyl-L-lysyl-L-lysyl-L-lysine, trifluoroacetate salt

Synonym: Pam₂Cys-Ser-(Lys)₄

MF: C₆₅H₁₂₆N₁₀O₁₂S • XCF₃COOH

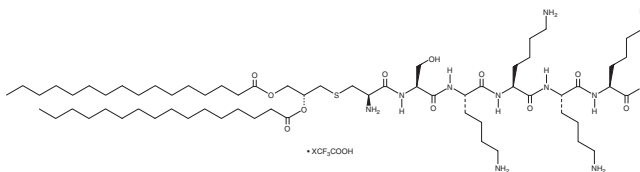
FW: 1,271.8

Purity: ≥98%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pam₂CSK₄ (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Pam₂CSK₄ (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Pam₂CSK₄ (trifluoroacetate salt) is soluble in the organic solvent acetic acid (0.25%) at a concentration of approximately 1 mg/ml.

Description

Pam₂CSK₄ is a synthetic bacterial lipopeptide and an agonist of the toll-like receptor 2 (TLR2).¹ It is selective for the TLR2/TLR6 heterodimer over TLR2/TLR1 (EC₅₀s = 0.015 and 4.12 ng/ml, respectively, in reporter assays using human receptors). Pam₂CSK₄ increases the levels of inducible nitric oxide synthase (iNOS) and the production of nitric oxide (NO) in RAW 264.7 macrophages when used at a concentration of 100 ng/ml.² It stimulates osteoclast formation, induces gingival inflammation, and decreases alveolar bone mass in a mouse model of periodontitis when administered at a dose of 5 µg/animal.³ Pam₂CSK₄ (10 µg/vaccine), when used as an adjuvant, reduces parasite burden and enhances the response to antigen, as measured by IgG levels, in a mouse model of lymphatic filariasis induced by *B. malayi*.⁴

References

1. Irvine, K.L., Hopkins, L.J., Gangloff, M., *et al.* The molecular basis for recognition of bacterial ligands at equine TLR2, TLR1 and TLR6. *Vet. Res.* **44**(1), 50 (2013).
2. Kulsantiwong, P., Pudla, M., Srisaowakarn, C., *et al.* Pam2CSK4 and Pam3CSK4 induce iNOS expression via TBK1 and MyD88 molecules in mouse macrophage cell line RAW264.7. *Inflamm. Res.* **66**(10), 843-853 (2017).
3. de Souza, J.A.C., Magalhães, F.A.C., de Oliveira, G.J.P.L., *et al.* Pam2CSK4 (TLR2 agonist) induces periodontal destruction in mice. *Braz. Oral. Res.* **34**, e012 (2020).
4. Halliday, A., Turner, J.D., Guimarães, A., *et al.* The TLR2/6 ligand PAM2CSK4 is a Th2 polarizing adjuvant in *Leishmania major* and *Brugia malayi* murine vaccine models. *Parasit. Vectors* **9**, 96 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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