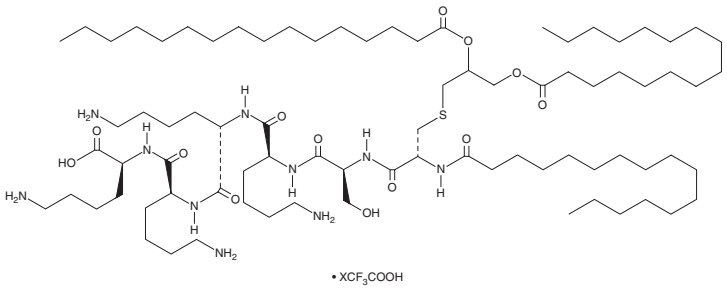
PRODUCT INFORMATION

Pam_3CSK_4 (trifluoroacetate salt)

Item No. 24126

Formal Name:	S-[2,3-*bis*[(1-oxohexadecyl)oxy]propyl]-N-(1-oxohexadecyl)-L-cysteinyl-L-seryl-L-lysyl-L-lysyl-L-lysyl-L-lysine, trifluoroacetate salt
Synonym:	$Pam_3Cys\text{-}Ser\text{-}(Lys)_4$
MF:	$C_{81}H_{156}N_{10}O_{13}S \bullet XCF_3COOH$
FW:	1,510.2
Purity:	≥95%
Supplied as:	A lyophilized powder
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Pam_3CSK_4 (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the Pam_3CSK_4 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Pam_3CSK_4 (trifluoroacetate salt) is soluble in the organic solvent formic acid at a concentration of approximately 1 mg/ml.

Description

Pam_3CSK_4 is a synthetic bacterial lipopeptide that binds to and acts as an agonist at toll-like receptor 2 (TLR2).[1] It induces proliferation of isolated mouse spleen cells and activates lymphocytes at a concentration of 50 µg/ml.[2] Pam_3CSK_4 is a potent immune adjuvant in mice, enhancing the response to antigen, as measured by IgM and IgG levels, when used at a dose of 200 µg/animal. It inhibits Th1 and Th2 responses, suppresses eosinophil infiltration, and induces $CD4^+$ T cell apoptosis in a mouse model of allergic conjunctivitis.[3] Pam_3CSK_4 (50 µg) decreases lesion size and parasite burden in genetically-resistant and -susceptible mice when administered with *L. major* to induce leishmaniasis.[4] It also enhances Th1 responses and stimulates IL-17 production in the early phase of infection.

References

1. Vasselon, T., Detmers, P.A., Charron, D., *et al.* TLR2 recognizes a bacterial lipopeptide through direct binding. *J. Immunol.* **173(12)**, 7401-7405 (2004).
2. Reitermann, A., Metzger, J., Wiesmüller, K.H., *et al.* Lipopeptide derivatives of bacterial lipoprotein constitute potent immune adjuvants combined with or covalently coupled to antigen or hapten. *Biol. Chem. Hoppe Seyler* **370(4)**, 343-352 (1989).
3. Fukushima, A., Yamaguchi, T., Ishida, W., *et al.* TLR2 agonist ameliorates murine experimental allergic conjunctivitis by inducing CD4 positive T-cell apoptosis rather than by affecting the Th1/Th2 balance. *Biochem. Biophys. Res. Commun.* **339(4)**, 1048-1055 (2006).
4. Huang, L., Hinchman, M., and Mendez, S. Coinjection with TLR2 agonist Pam3CSK4 reduces the pathology of leishmanization in mice. *PLoS Negl. Trop. Dis.* **9(3)**, e0003546 (2015).

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