

Product Information

Pam₃Cys-GDPKHPKSF

For Research Purposes only. Not for use in Humans



Product	XS15												
Chemical name	N-Palmitoyl-S-[2,3-bis(palmitoyloxy)-(2 <i>R</i>)-propyl]-(<i>R</i>)-cysteiny-GDPKHPKSF												
CAS	Not available												
MW / Formula	1919.7 / C ₁₀₁ H ₁₇₃ N ₁₄ O ₁₉ S												
Lot No.	X921												
Vial content	1 mg												
Description	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> </div> <div style="flex: 2; padding-left: 20px;"> <p>The adjuvant XS15 is a water-soluble TLR2/TLR1 ligand inducing strong CD8 and T_H1 CD4 response against free short peptides emulsified in Montanide™ ISA 51 after a single s.c. injection. It was shown that the granuloma induced by injection of a mixture of short synthetic peptides and Montanide™ shows high concentration of functional antigen specific T cells that produce IFN_γ, TNF, and IL2, CD8 cells also produce CD107a, but no IL10 [1]. High frequencies of antigen specific T cell were also found in the peripheral blood. XS15 supports potent T-cell response in a COVID-19 peptide vaccine [2, 3].</p> </div> </div>												
Packaging Reconstitution Storage	<p>The lipopeptide is provided as a endotoxin-free, lyophilised, colourless powder without any additives. It can be shipped at room temperature and the lyophilized powder should be stored at 4°C.</p> <p>XS15 can be reconstituted in endotoxin-free water (1 mg/ml stock solution). Through the use of either a homogeniser or sonicator, a homogenous solution can be prepared. For the purpose of dissolution temperature up to 50 °C is accepted.</p> <p>After reconstitution, the solution should be aliquoted and stored at or below –20°C. Repeated thawing and freezing should be avoided.</p> <p>XS15 is available in two packing sizes: 1 mg and 5 mg.</p>												
Application	<p>XS15 is recommended for immunisation in combination with Montanide™ ISA 51 (SEPPIC GmbH, Köln, Germany) [4] to generate a strong immune response against free short peptides.</p> <p>Application:</p> <table border="1"> <thead> <tr> <th colspan="3">Recommendations for immunising mice</th> </tr> </thead> <tbody> <tr> <td>Antigen</td> <td>300 µg</td> <td>100 µl</td> </tr> <tr> <td>Adjuvant XS15</td> <td>50 µg (1 mg/ml solution)</td> <td></td> </tr> <tr> <td>Montanide™ ISA 51</td> <td>100 µl</td> <td>100 µl</td> </tr> </tbody> </table> <p>Immunisation regimen:</p> <ul style="list-style-type: none"> • Reconstitute the vial containing XS15 in sterile, endotoxin-free water (1mg/ml). • Mix the required amounts of XS15 with your antigen. Total volume XS15 + antigen 100 µl. • Prepare the emulsion with 100 µl Montanide™ ISA 51 according to manufacturer's SOP. Total volume 200 µl. • It is easier to prepare a higher volume (1-2 ml) even if only 0.2 ml is injected. <p>Recommended mode of administration</p> <p>immunisation of mice: subcutaneous, primary immunisation followed by two booster</p>	Recommendations for immunising mice			Antigen	300 µg	100 µl	Adjuvant XS15	50 µg (1 mg/ml solution)		Montanide™ ISA 51	100 µl	100 µl
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Handling

Good laboratory technique should be employed in the safe handling of any lipopeptide product. If you are not fully trained or are unaware of the hazards involved, do not use this compound!

Caution: Do not take internally! Avoid contact by all modes of exposure. Wear appropriate laboratory attire including a lab coat, gloves, mask and safety glasses. Do not mouth pipette, inhale, ingest or allow coming into contact with open wounds. Wash thoroughly any area of the body which comes into contact with the product. Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.

This product is intended for research purposes by qualified personnel only. It is not intended for use in humans or as a diagnostic agent. EMC microcollections GmbH is not liable for any damages resulting from misuse or handling of this product.

References

- [1] H.-G. Rammensee, K.-H. Wiesmüller, P. A. Chandran et al. (2019) A new synthetic toll-like receptor 1/2 ligand is an efficient adjuvant for peptide vaccination in a human volunteer. *J. Immunotherapy Cancer* 7, 307 doi:10.1186/s40425-019-0796-5.
- [2] H.-G. Rammensee, C. Gouttefangeas, C. Heidt et al. (2021) Designing a SARS-CoV-2 T-cell-Inducing vaccine for high-risk patient groups. *Vaccines* 9, 428. <https://doi.org/10.3390/vaccines9050428>
- [3] J.S. Heitmann, T. Bilich, C. Tandler et al. (2021) A COVID-19 peptide vaccine for the induction of SARS-CoV-2 T cell immunity. *Nature*, doi.org/10.1038/s41586-021-04232-5. (Accelerated Article Preview Published online 23 November 2021)
- [4] S. Ascarateil et al. (2015) Safety data of Montanide ISA 51 VG and Montanide ISA 720 VG, two adjuvants dedicated to human therapeutic vaccines. *Journal for Immunotherapy of Cancer* 3(Suppl 2):P428.