Product Information Pam-Dhc-SKKKK



For Research Purposes only. Not for use in Humans

Product	L2010
Chemical name	N-Palmitoyl-S-[2,3-dihydroxy-(2RS)-propyl]-(R)-cysteinyl-(S)-seryl-(S)-lysy
Synonyms	Pam-Dhc-Ser-(Lys) ₄ x 3 CH ₃ COOH
CAS	Not available
MW / Formula	1033.4 • 180 / C ₄₉ H ₉₆ N ₁₀ O ₁₁ S
Structure	HO-CH ₂ HOCH HOCH CH ₂ S CH ₂ CH ₂ CH ₂ CH ₃ (CH ₂) ₁₄ HOCH CH ₂ S CH ₃ (CH ₂) ₁₄ HOCH CH ₂ S CH ₃ (CH ₂) ₁₄ Bacterial - including mycoplasmal - lipoproteins are character- ised by the unusual amino acid dihydroxypropylcysteine (Dhc) acylated by two or three fatty acids. Pam-Dhc-SKKKK is a monoacylated lipopeptide with the unu- sual amino acid Dhc. It represents a substructure of the TLR2 ligand Pam ₃ Cys-SKKKK and analogues.
Packaging Reconstitution Storage	The lipopeptide is provided as a lyophilised, colourless powder without any additives. It can be shipped at room temperature and should be stored at 4°C. Pam-Dhc-SKKKK can be reconstituted in endotoxin-free water (1 mg/ml stock solution). Through the use of either a homogeniser or sonicator, a homogenous solution or emulsion can be prepared. If you use an ultrasonic bath, take care of the vial labels. For further dilutions water, saline, buffer (pH \leq 7.4) or media can be used. After reconstitution, the solution should be aliquoted and stored at or below –20°C. Repeated thawing and freezing should be avoided.
Handling	Good laboratory technique should be employed in the safe handling of any lipopeptide prod- uct. If you are not fully trained or are unaware of the hazards involved, do not use this com- pound! 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 to come into contact with open wounds. Wash thoroughly any area of the body which comes into contact with the product. Avoid accidental autoinoculation by exer- cising 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	 K. Hantke, V. Braun (1973) Covalent binding of lipid to protein. Diglyceride and amide-linked fatty acid at the N-terminal end of the murein-lipoprotein of the Escherichia coli outer membrane, Eur. J. Biochem. 34, 284. A. O. Aliprantis, R. B.Yang, M. R. Mark, S. Suggett, B. Devaux, J. D. Radolf, G. P. Klimpel, P. Godowski, A. Zychlinsky (1999) Cell Activation and Apoptosis by Bacterial Lipoproteins Through Toll-like Receptor-2. Science 285, 736-739. O. Takeuchi, T. Kawai, P. F. Midhradt, M. Morr, J. D. Radolf, A. Zychlinsky, K. Takeda, S. Akira (2001) Discrimination of bacterial lipoproteins by Toll-like receptor 6. Int. Immunol. 13, 933-940. U. Buwitt-Beckmann, H. Heine, KH. Wiesmüller, G. Jung, R. Brock, S. Akira, A. J. Ulmer (2005). Toll-like receptor 6-independent signaling by diacylated lipopeptides. Eur. J. Immunol. 55, 282-289. U. Buwitt-Beckmann, H. Heine, KH. Wiesmüller, G. Jung, R. Brock, S. Akira, A. J. Ulmer (2006) TLR1- and TLR6-independent recognition of bacterial lipopeptides. J. Biol. Chem. 281, 9049–9057. K. O. Omueti, J. M. Beyer, C. M. Johnson, E. A. Lyle, R. I. Tapping (2005) Domain exchange between human toll-like receptors 1 and 6 reveals a region required for lipopeptide discrimination. J. Biol. Chem. 280, 36616–36625. M. S. Jin et al. (2007) Crystal Structure of the TLR1-TLR2 Heterodimer Induced by Binding of a Tri-Acylated Lipopeptide. Cell 130, 1071. J. Y.Kang, X. Nan, M. S. Jin, S. J. Youn, Y. H. Ryu, S. Mah, S. H. Han, H. Lee, S. G. Paik, J. O. Lee (2009) Recognition of lipopeptide patterns by Toll-like receptor 2-Toll-like receptor 6 heterodimer. Immunity doi:10.1016/j.immuni.2009.09.018