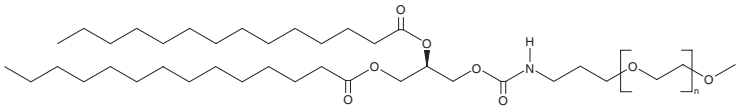
PRODUCT INFORMATION

C-DMG-mPEG(2000)

Item No. 37149

Formal Name:	α-[3-[[[2,3-*bis*[(1-oxotetradecyl)oxy]propoxy]carbonyl]amino]propyl]-ω-methoxy-poly(oxy-1,2-ethanediyl)
Synonyms:	PEG_{2000}-C-DMG, Polyethylene Glycol-2000-C-DMG
MF:	$(C_2H_4O)_nC_{36}H_{69}NO_7$
Purity:	≥95%
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

C-DMG-mPEG(2000) is supplied as a solid. A stock solution may be made by dissolving the C-DMG-mPEG(2000) in the solvent of choice, which should be purged with an inert gas. C-DMG-mPEG(2000) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of C-DMG-mPEG(2000) in ethanol is approximately 10 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of C-DMG-mPEG(2000) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of C-DMG-mPEG(2000) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

C-DMG-mPEG(2000) is a PEGylated derivative of 1,2-dimyristoyl-*sn*-glycerol (1,2-DMG; Item No. 15077).[1] It has been used in combination with other lipids in the formation of lipid nanoparticles (LNPs) for the delivery of siRNA. LNPs containing C-DMG-mPEG(2000) and encapsulating siRNA targeting the genes encoding programmed cell death protein ligand 1 (PD-L1) and PD-L2 decrease PD-L1 and PD-L2 levels in monocyte-derived dendritic cells. Formulations containing C-DMG-mPEG(2000) have been used in the development of LNPs for the delivery of siRNA-based vaccines.

Reference

1. Hobo, W., Novobrantseva, T., Fredrix, H., *et al.* Improving dendritic cell vaccine immunogenicity by silencing PD-1 ligands using siRNA-lipid nanoparticles combined with antigen mRNA electroporation. *Cancer Immunol. Immunother.* **62(2)**, 285-297 (2013).

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