

PRODUCT INFORMATION



DSPE-MPEG(5000)

Item No. 43359

CAS Registry No.: 156543-00-9

Formal Name: α -[(9R)-6-hydroxy-6-oxido-1,12-dioxo-9-[(1-oxooctadecyl)oxy]-5,7,11-trioxa-2-aza-6-phosphanonacos-1-yl]- ω -methoxy-poly(oxy-1,2-ethanediyl)

Synonyms: 1,2-Distearoyl-*sn*-glycero-3-PE-methoxy-Polyethyleneglycol-5000, 1,2-Distearoyl-*sn*-glycero-3-Phosphoethanolamine-mPEG-5000, 1,2-DSPE-MPEG(5000), Methyl-PEG5000-DSPE, MPEG-5000-DSPE

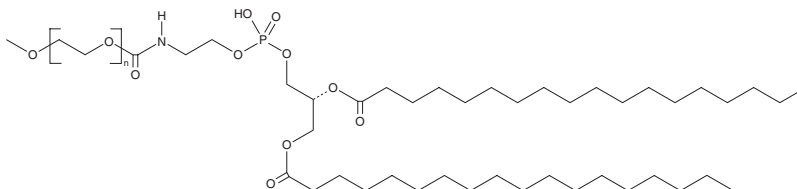
MF: $(C_2H_4O)_n C_{43}H_{84}NO_{10}P$

Purity: $\geq 90\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 1 year



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

Laboratory Procedures

DSPE-MPEG(5000) is supplied as a solid. A stock solution may be made by dissolving the DSPE-MPEG(5000) in the solvent of choice, which should be purged with an inert gas. DSPE-MPEG(5000) is slightly soluble (0.1-1 mg/ml) in DMSO.

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 DSPE-MPEG(5000) can be prepared by directly dissolving the solid in aqueous buffers. DSPE-MPEG(5000) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

DSPE-MPEG(5000) is a PEGylated form of 1,2-distearoyl-*sn*-glycero-3-PE (1,2-DSPE; Item No. 15095). It has been used in the generation of lipid nanoparticles (LNPs) and liposomes for *in vitro* and *in vivo* two-photon bioimaging.^{1,2}

References

1. Wang, D., Qian, J., Qin, W., *et al.* Biocompatible and photostable AIE dots with red emission for *in vivo* two-photon bioimaging. *Sci. Rep.* 4, 4279 (2014).
2. Zhan, Q., Qian, J., Liang, H., *et al.* Using 915 nm laser excited $\text{Tm}^{3+}/\text{Er}^{3+}/\text{Ho}^{3+}$ -doped NaYbF_4 upconversion nanoparticles for *in vitro* and deeper *in vivo* bioimaging without overheating irradiation. *ACS Nano* 5(5), 3744-3757 (2011).

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.

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