

PRODUCT INFORMATION



DSPE-MPEG(2000) (sodium salt)

Item No. 28181

CAS Registry No.: 459428-35-4

Formal Name: α -[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), monosodium salt

Synonyms: 1,2-Distearoyl-*rac*-glycero-3-PE-N-Polyethyleneglycol-2000,
1,2-Distearoyl-*rac*-glycerol-3-Phosphatidylethanolamine-N-Polyethyleneglycol-2000,
1,2-Distearoyl-*rac*-glycerol-3-Phosphoethanolamine-N-Polyethyleneglycol-2000,
1,2-DSPE-MPEG(2000)

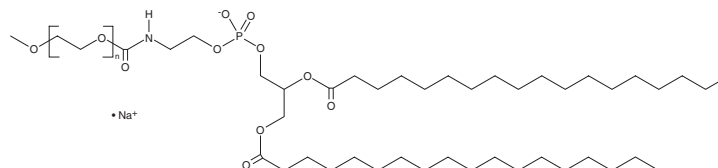
MF: $(C_2H_4O)_n C_{43}H_{83}NO_{10}P \cdot Na$

Purity: $\geq 90\%$

Supplied as: A solid

Storage: $-20^\circ C$

Stability: ≥ 4 years



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

Laboratory Procedures

DSPE-MPEG(2000) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the DSPE-MPEG(2000) (sodium salt) in the solvent of choice, which should be purged with an inert gas. DSPE-MPEG(2000) (sodium salt) is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 2.5 mg/ml.

DSPE-MPEG(2000) (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DSPE-MPEG(2000) (sodium salt) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DSPE-MPEG(2000) (sodium salt) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DSPE-MPEG(2000) is a PEGylated derivative of 1,2-distearoyl-*sn*-glycero-3-PE (DSPE; Item No. 15095). Formulations containing DSPE-MPEG(2000) have been used in the synthesis of liposomes for the delivery of anticancer and antimalarial agents.¹⁻³

References

1. Hasan, G.M., Garg, N., Dogra, E., *et al.* Inhibition of the growth of *Plasmodium falciparum* in culture by stearylamine-phosphatidylcholine liposomes. *J. Parasitol. Res.* 120462 (2011).
2. Rathore, S.S. and Ghosh, P.C. Effect of surface charge and density of distearylphosphatidylethanol amine-mPEG-2000 (DSPE-mPEG-2000) on the cytotoxicity of liposome-entrapped ricin: Effect of lysosomotropic agents. *Int. J. Pharm.* **350(1-2)**, 79-94 (2008).
3. Haghirsadat, F., Amoabediny, G., Helder, M.N., *et al.* A comprehensive mathematical model of drug release kinetics from nano-liposomes, derived from optimization studies of cationic PEGylated liposomal doxorubicin formulations for drug-gene delivery. *Artif. Cells Nanomed. Biotechnol.* **46(1)**, 169-177 (2018).

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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