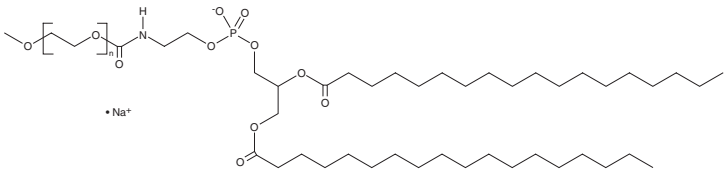
PRODUCT INFORMATION

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: $(C_2H_4O)_n$ $C_{43}H_{83}NO_{10}P$ • Na
Purity: ≥90%
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

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. Haghiralsadat, 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).

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