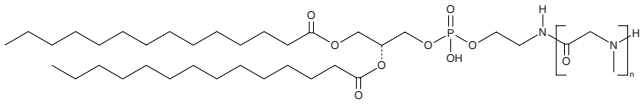
PRODUCT INFORMATION

DMPE-pSar50-H

Item No. 44168

Formal Name: (2R)-3-((hydroxy(2-(2-(methylamino)acetamido) ethoxy)phosphoryl)oxy)propane-1,2-diyl ditetradecanoate

Synonyms: 1,2-Dimyristoyl-*sn*-glycero-3-Phosphoethanolamine-Polysarcosine50, 1,2-Dimyristoyl-*sn*-glycero-3-Phosphoethanolamine-pSar50-H, 1,2-Ditetradecanoyl-*sn*-glycero-3-Phosphoethanolamine-pSar50-H, 1,2-DMPE-pSar50-H, PE(14:0/14:0)-pSar50-H, PtdEtn-(1,2-Dimyristoyl)-pSar50-H



MF: $(C_3H_5NO)_nC_{33}H_{66}NO_8P$

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

DMPE-pSar50-H is supplied as a solid. A stock solution may be made by dissolving the DMPE-pSar50-H in the solvent of choice, which should be purged with an inert gas. DMPE-pSar50-H is soluble in the organic solvent ethanol at a concentration of approximately 25 mg/ml.

Description

DMPE-pSar50-H is an amine-functionalized hydrophilic polymer and a polysarcosine-conjugated form of 1,2-dimyristoyl-*sn*-glycero-3-PE (1,2-DMPE; Item No. 15090). Polysarcosines (pSars) have been used as alternatives to PEGylated lipids in lipid nanoparticles (LNPs).[1] Liposomes containing PSar exhibit similar physicochemical properties *in vitro* to those containing PEGylated lipids but do not undergo the accelerated blood clearance (ABC) phenomenon and show reduced immunogenicity in rats.[2] For more information, please see Curapath's white paper: Polysarcosine (pSar) a safer, more effective alternative to poly-ethylene glycol (PEG).

References

1. Nogueira, S.S., Schlegel, A., Maxeiner, K., *et al.* Polysarcosine-functionalized lipid nanoparticles for therapeutic mRNA delivery. *ACS Appl. Nano Mater.* **3(11),** 10634-10645 (2020).
2. Son, K., Ueda, M., Taguchi, K., *et al.* Evasion of the accelerated blood clearance phenomenon by polysarcosine coating of liposomes. *J. Control Release* **322,** 209-216 (2020).

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