

# 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

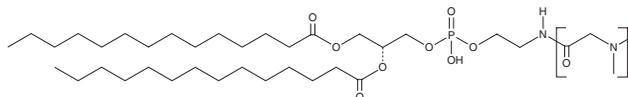
**MF:**  $(C_3H_5NO)_n C_{33}H_{66}NO_8P$

**Purity:**  $\geq 95\%$

**Supplied as:** A solid

**Storage:**  $-20^\circ\text{C}$

**Stability:**  $\geq 4$  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).<sup>1</sup> 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.<sup>2</sup> 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/15/2025

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM