

PRODUCT INFORMATION



DSPE-PEG(2000) Maleimide

Item No. 43957

CAS Registry No.: 1612754-08-1

Formal Name: α -[2-[[3-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1-oxopropyl]amino]ethyl]- ω -[[[(9R)-6-hydroxy-6-oxido-1,12-dioxo-9-[[1-oxooctadecyl]oxy]-5,7,11-trioxa-2-aza-6-phosphanonacos-1-yl]oxy]-poly(oxy-1,2-ethanediyl)]

Synonyms: 1,2-Distearoyl-*sn*-glycero-3-PE-Polyethylene Glycol-2000-maleimide, 1,2-Distearoyl-*sn*-glycero-3-Phosphoethanolamine-N-[azido(Polyethylene Glycol)-2000] maleimide, DSPE-PEG2k-maleimide, 1,2-DSPE-PEG(2000)-maleimide

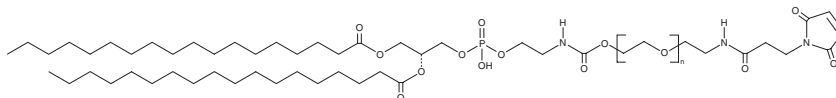
MF: $(C_{22}H_{44}O)_n C_{51}H_{92}N_3O_{13}P$

Purity: $\geq 95\%$

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

DSPE-PEG(2000) maleimide is supplied as a solid. A stock solution may be made by dissolving the DSPE-PEG(2000) maleimide in the solvent of choice, which should be purged with an inert gas. DSPE-PEG(2000) maleimide is soluble (≥ 10 mg/ml) in ethanol.

Description

DSPE-PEG(2000) maleimide is a PEGylated form of 1,2-distearoyl-*sn*-glycero-3-PE. It has been used in the synthesis of lipid nanoparticles (LNPs) for the delivery of siRNA or small molecule anticancer agents *in vitro* and *in vivo*.¹⁻³ LNPs containing DSPE-PEG(2000) maleimide and encapsulating siRNAs targeting mRNA encoding p53 and K-Ras induce tumor regression in a PANC-1 pancreatic ductal adenocarcinoma mouse xenograft model.¹

References

1. Wang, Q., Zhang, Z., Wang, Z., *et al.* Bispecific, exosome-mimetic lipid nanoparticles facilitate dual siRNAs for synergistic therapy against pancreatic cancer. *Adv. Funct. Mater.* **34**(29), 2400485 (2024).
2. Gao, J., Liu, W., Xia, Y., *et al.* The promotion of siRNA delivery to breast cancer overexpressing epidermal growth factor receptor through anti-EGFR antibody conjugation by immunoliposomes. *Biomaterials* **32**(13), 3459-3470 (2011).
3. van der Meel, R., Oliveira, S., Altintas, I., *et al.* Tumor-targeted nanobullets: Anti-EGFR nanobody-liposomes loaded with anti-IGF-1R kinase inhibitor for cancer treatment. *J. Control. Release* **159**(2), 281-289 (2012).

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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