

PRODUCT INFORMATION



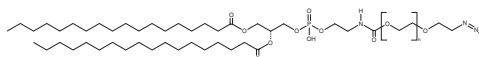
DSPE-PEG(2000)-Azide

Item No. 43268

CAS Registry No.: 1938081-39-0

Formal Name: α -[(9R)-6-hydroxy-6-oxido-1,12-dioxo-9-[[1-oxooctadecyl)oxy]-5,7,11-trioxa-2-aza-6-phosphanonacos-1-yl]- ω -(2-azidoethoxy)-poly(oxy-1,2-ethanediyl)

Synonyms: 1,2-DSPE-PEG(2000)-azide, 1,2-Distearoyl-*sn*-glycero-3-PE-Polyethylene Glycol-2000-azide, 1,2-Distearoyl-*sn*-glycero-3-Phosphoethanolamine-N-[azido(Polyethylene Glycol)-2000], azide-DSPE-PEG2000, DSPE-PEG2k-azide



MF: $(C_2H_4O)_n C_{44}H_{85}N_4O_{10}P$

Purity: $\geq 95\%$

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-PEG(2000)-azide is supplied as a solid. A stock solution may be made by dissolving the DSPE-PEG(2000)-azide in the solvent of choice, which should be purged with an inert gas. DSPE-PEG(2000)-azide is slightly soluble (0.1-1 mg/ml) in ethanol and DMSO.

Description

DSPE-PEG(2000)-azide is a PEGylated derivative of 1,2-distearoyl-*sn*-glycero-3-PE (1,2-DSPE; Item No. 15095). It has been used in copper(I)-catalyzed azide-alkyne cycloaddition (CuAAC) and copper-free click chemistry, including strain-promoted alkyne-azide cycloaddition (SPAAC).^{1,2} DSPE-PEG(2000)-azide has been used to attach vascular cell adhesion molecule-1 (VCAM-1) antibodies to the surface of liposomes encapsulating fingolimod (Item Nos. 11975 | 10006292) to provide targeted delivery of fingolimod to inflamed vasculature in a mouse model of post-stroke neuroinflammation.³ It has also been used to attach fibrinogen mimetic peptide (FMP) to the surface of synthetic platelets used in a mouse model of liver injury-induced uncontrolled hemorrhage.⁴

References

1. D'Acunzo, F., Carbonaro, L., Cort, A.D., *et al.* Click-connected 2-(hydroxyimino)aldehydes for the design of UV-responsive functional molecules. *Eur. J. Org. Chem.* **2**, 289-294 (2021).
2. Xiao, Y., Liu, Q., Clulow, A.J., *et al.* PEGylation and surface functionalization of liposomes containing drug nanocrystals for cell-targeted delivery. *Colloids Surf. B Biointerfaces* **182**, 110362 (2019).
3. Zaleski, M.H., Omo-Lamai, S., Nong, J., *et al.* Nanocarriers' repartitioning of drugs between blood subcompartments as a mechanism of improving pharmacokinetics, safety, and efficacy. *J. Control. Release* **374**, 425-440 (2024).
4. Dyer, M.R., Hickman, D., Luc, N., *et al.* Intravenous administration of synthetic platelets (SynthoPlate) in a mouse liver injury model of uncontrolled hemorrhage improves hemostasis. *J. Trauma Acute Care Surg.* **84**(6), 917-923 (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.

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, 08/28/2025

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