

PRODUCT INFORMATION



1-Palmitoyl-d₉-2-Palmitoyl-*sn*-glycero-3-PE MaxSpec® Standard

Item No. 30597

Formal Name: (2R)-3-(((2-aminoethoxy)(hydroxy)phosphoryl)oxy)-2-(palmitoyloxy)propyl hexadecanoate-13,13,14,14,15,15,16,16,16-d₉

Synonyms: 16:0-d₉/16:0-PE, 1-Hexadecanoyl-d₉-2-Hexadecanoyl-*sn*-glycero-3-Phosphatidylethanolamine, 1-Hexadecanoyl-d₉-2-Hexadecanoyl-*sn*-glycero-3-Phosphoethanolamine, PE(16:0-d₉/16:0)

MF: C₃₇H₆₅D₉NO₈P

FW: 701.0

Purity: ≥95%

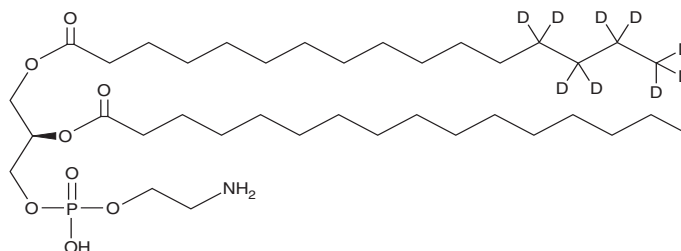
Supplied as: A 90:10 solution in chloroform:methanol; in a deactivated glass ampule

Concentration: 100 µg/ml (nominal); see certificate of analysis for verified concentration

Storage: -80°C

Stability: ≥1 year; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*

Special Conditions: Store upright and unopened at -80°C. Warm to room temperature prior to opening. Light sensitive.



Description

1-Palmitoyl-d₉-2-palmitoyl-*sn*-glycero-3-PE is intended for use as an internal standard for the quantification of 1,2-dipalmitoyl-*sn*-glycero-3-PE (Item No. 15092) by GC- or LC-MS. 1,2-Dipalmitoyl-*sn*-glycero-3-PE (1,2-DPPE) is a naturally occurring PE containing C16:0 fatty acids at the *sn*-1 and *sn*-2 positions. It belongs to a class of phospholipids that are the most abundant lipids in the inner leaflet of the plasma membrane.¹ 1,2-DPPE interacts with cholesterol to form a condensed lipid monolayer with tight hydrogen bonding of the 1,2-DPPE interheadgroups, resulting in a more fluid membrane that may aid in transport and signaling across the bilayer.^{2,3}

1-Palmitoyl-d₉-2-palmitoyl-*sn*-glycero-3-PE MaxSpec® standard is a quantitative grade standard of 1-palmitoyl-d₉-2-palmitoyl-*sn*-glycero-3-PE (Item No. 28155) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This 1-palmitoyl-d₉-2-palmitoyl-*sn*-glycero-3-PE MaxSpec® standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. **Note:** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Vance, J.E. and Tasseva, G. Formation and function of phosphatidylserine and phosphatidylethanolamine in mammalian cells. *Biochim. Biophys. Acta* **1831**(3), 543-554 (2013).
2. McQuaw, C.M., Sostarecz, A.G., Zheng, L., *et al.* Lateral heterogeneity of dipalmitoylphosphatidylethanolamine-cholesterol Langmuir-Blodgett films investigated with imaging time-of-flight secondary ion mass spectrometry and atomic force microscopy. *Langmuir* **21**(3), 807-813 (2005).
3. Leekumjorn, S. and Sum, A.K. Molecular simulation study of structural and dynamic properties of mixed DPPC/DPPE bilayers. *Biophys. J.* **90**(11), 3951-3965 (2006).

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, 11/18/2021

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