

# PRODUCT INFORMATION



## 1,2-Dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) (sodium salt)

Item No. 25724

CAS Registry No.: 384835-52-3

Formal Name: hexadecanoic acid, 1,1'-[(1R)-1-[19-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-3-hydroxy-3-oxido-8,15-dioxo-2,4-dioxa-7,14-diaza-3-phosphanadec-1-yl]-1,2-ethanediyl] ester, monosodium salt

Synonyms: biotin-cap-DPPE, 16:0 Biotinyl Cap PE, 1,2-Dipalmitoyl-*sn*-glycero-3-Phosphoethanolamine-N-(cap biotin)

MF: C<sub>53</sub>H<sub>98</sub>N<sub>4</sub>O<sub>11</sub>PS • Na

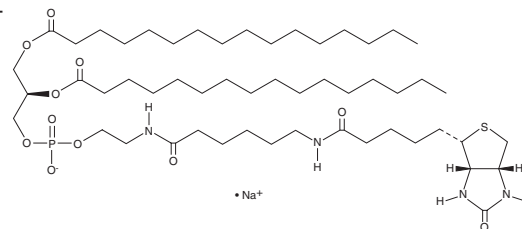
FW: 1,053.4

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

1,2-Dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the 1,2-dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) (sodium salt) in the solvent of choice, which should be purged with an inert gas. 1,2-Dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) (sodium salt) is slightly soluble in DMSO.

### Description

1,2-Dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) is a biotinylated phospholipid. It has been used in PEGylated polyamidoamine-dendrimer-conjugated supported lipid bilayers (SLB) to isolate circulating tumor cells and tumor cell microembolus from patient-derived blood by antibody-coated microfluidics.<sup>1</sup> It has also been used as a component of SLBs to detect protein-ligand binding with *ortho*-conjugated Texas Red DHPE.<sup>2</sup> In addition, 1,2-dipalmitoyl-*sn*-glycero-3-PE-N-(cap biotin) has been used in SLBs partitioned into nanowells to create DNA curtains, which can be used as a high-throughput tool for detection of protein-DNA interactions at the single molecule level.<sup>3</sup>

### References

1. Yeh, P.-Y., Chen, Y.-R., Wang, C.-F., *et al.* Promoting multivalent antibody-antigen interactions by tethering antibody molecules on a PEGylated dendrimer-supported lipid bilayer. *Biomolecules* **19**(2), 426-437 (2018).
2. Jung, H., Robison, A.D., and Cremer, P.S. Detecting protein-ligand binding on supported bilayers by local pH modulation. *J. Am. Chem. Soc.* **131**(3), 1006-1014 (2009).
3. Visnapuu, M.-L., Fazio, T., Wind, S., *et al.* Parallel arrays of geometric nanowells for assembling curtains of DNA with controlled lateral dispersion. *Langmuir* **24**(19), 11293-11299 (2008).

#### 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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