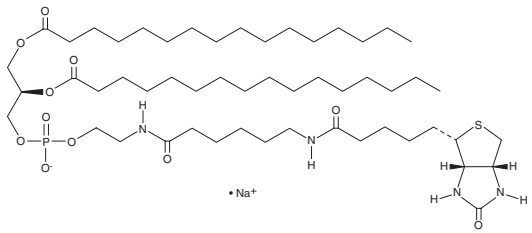
PRODUCT INFORMATION

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-phosphanonadec-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: $C_{53}H_{98}N_4O_{11}PS \bullet Na$
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 microembolis from patient-derived blood by antibody-coated microfluidics.[1] It has also been used as a component of SLBs to detect protein-ligand binding with *ortho*-conjugated Texas Red DHPE.[2] 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.[3]

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).

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