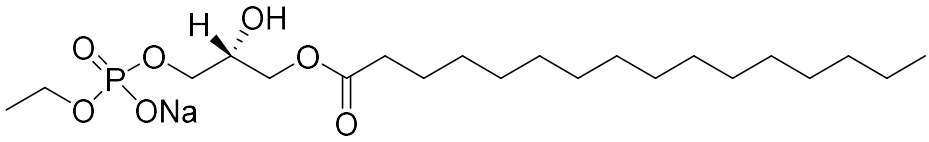
# 16:0 LysoPEth

**Catalog number:** L-6036



**Molecular Formula:** $C_{21}H_{42}NaO_7P$

**MW:** 460.52

**CAS#:** 77444-36-1

**Alternative Names:** 1-Palmitoyl-sn-glycero-3-phosphoethanol, Sodium (R)-ethyl (2-hydroxy-3-(palmitoyloxy)propyl) phosphate

**Solubility:** 65:35:4 $CHCl_3$:MeOH:$H_2O$ 1 mg/mL

**Storage and Handling:** Lysophosphatidylethanol (LPEth) is stable for at least one year when stored as a solid, protected from moisture, and light at -20°C. Reconstitute with methanol and dilute with water or neutral pH, buffered salt solutions, i.e. PBS, TBS, etc. Storage in basic (pH > 9) or acidic (pH < 4) buffers will result in slow decomposition of the product. After reconstitution, solutions of LPEth should be stored at -20°C between uses. LPEth is stable for at least three months when handled in this way. Repeated freeze/thaw cycles do not affect LPEth. Do not store reconstituted LPEth at 4°C for more than 2-3 days.

**Background:** Phosphatidylethanol (PEth) is formed primarily in the liver by transphosphatidylation of phosphatidylcholine (PC) by phospholipase D in the presence of ethanol. PEth is a long-lived circulating EtOH biomarker with forensic and biomedical applications. LysoPEth is formed through loss of the the sn-1 acyl chain and is also reported to be a biomarker of alcohol consumption.

**References:** 1) M. Bantle, L. van Tieghem, et al. "Lyso-phosphatidylethanol detected by LC-MS/MS as a potential new marker for alcohol consumption" Eur J Mass Spectrom. 2023 Oct;29(5-6):338-347. doi: 10.1177/14690667231200014
2) Varga A, Hansson P, Johnson G, Alling C (2000) Normalization rate and cellular localization of phosphatidylethanol in whole blood from chronic alcoholics. Clin Chim Acta 299: 141-150.
3) Freeman, W. M., and Vrana, K. E., (2010) Future prospects for biomarkers of alcohol consumption and alcohol-induced disorders, Alcohol Clin Exp Res, 34, 946.
4) Wurst, F. M., et. al., (2010) Phosphatidylethanol: normalization during detoxification, gender aspects and correlation with other biomarkers and self-reports, Addict Biol, 15, 88.





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