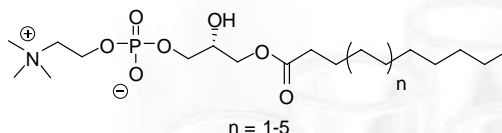


Synthetic Lysophospholipids

Synthetic lysophospholipids have a variety of uses in membrane protein science including membrane protein purification, folding, and structural studies. Lysophosphatidylcholine (LPC), in particular, has been used to purify functional recombinant human P-glycoprotein and the cystic fibrosis transmembrane conductance regulator (CFTR) as well as the G-protein coupled vasopressin V₁ receptor.

Lysophospholipids have also been shown to be components of oxidized low density lipoproteins (LDL) in atherosclerotic lesions, they play a role in several cell signaling pathways, and enhance radiation-induced apoptosis of malignant cells. In vivo, LPC modulates inflammatory responses. LPC is synthesized by the enzymatic hydrolysis of phosphatidylcholine by phospholipase A₂. This highly specific lipase cleaves the acyl chain at the sn-2 position leaving a single acyl chain in the sn-1 position.



Anatrace's line of lysophosphatidylcholines, the LysoFos™ Cholines, are produced according to our rigorous standards of purity; all products are ≥99% pure by HPLC and have low absorbance and conductance specifications. We offer five different acyl chain lengths (C10, C12, C14, C16, and C18) to provide you with a variety of lysophospholipids with a range of physical properties.

STORAGE AND HANDLING:

LysoFos™ Cholines should be stored at -20°C.
LysoFos™ Cholines are hygroscopic; protect from moisture.
Lysophospholipids are subject to acyl chain migration in acidic aqueous solution.

REFERENCES:

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2. Han, KH. et al. Lysophosphatidylcholine up-regulates CXCR4 chemokine receptor expression in human CD4 T cells. *J Leuk Bio.* 2004;76:195-202.
3. Klammt, C. et al. Evaluation of detergents for the soluble expression of α-helical and β-barrel-type integral membrane proteins by a preparative scale individual cell-free expression system. *FEBS J.* 2005;272:6024-6038.
4. Kougiyas, P. et al. Lysophosphatidylcholine and secretory phospholipase A2 in vascular disease: mediators of endothelial dysfunction and atherosclerosis. *Med Sci Monit.* 2006;12:RA5-16.
5. Mao, Q., and Scarborough, GA. Purification of functional human P-glycoprotein expressed in *Saccharomyces cerevisiae*. *Biochim Biophys Acta.* 1997;1327:107-118.
6. O'Riordan, CR. et al. Purification and characterization of recombinant cystic fibrosis transmembrane conductance regulator from Chinese hamster ovary and insect cells. *J Biol Chem.* 1995;270:17033-17043.
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8. Sanders, CR., and Sönnichsen, F. Solution NMR of membrane proteins: practice and challenges. *Magn Reson Chem.* 2006;44:S24-S40.

It's all about purity.

Synthetic Lysophospholipids

L210 LysoFos™ Choline 10, ANAGRADE®

[1-Capryl-2-hydroxy-sn-glycero-3-phosphocholine]

FW: 411.48 [22248-63-1] C₁₈H₃₈NO₇P

CMC (H₂O) 7.0 mM

Purity ≥ 99% by HPLC analysis.

pH (1% solution) 5-8

Solubility in water at 0-5°C >10%

Conductance (10% solution) <200 μS

Absorbance of a 1% detergent solution:

340 nm < 0.02

280 nm < 0.08

260 nm < 0.1

L216 LysoFos™ Choline 16, ANAGRADE®

[1-Palmitoyl-2-hydroxy-sn-glycero-3-phosphocholine]

FW: 495.64 [17364-16-8] C₂₄H₅₀NO₇P

CMC (H₂O) 0.0070 mM

Purity ≥ 99% by HPLC analysis.

pH (1% solution) 5-8

Solubility in water at 0-5°C >10%

Conductance (10% solution) <200 μS

Absorbance of a 1% detergent solution:

340 nm < 0.02

280 nm < 0.08

260 nm < 0.1

L212 LysoFos™ Choline 12, ANAGRADE®

[1-Lauroyl-2-hydroxy-sn-glycero-3-phosphocholine]

FW: 439.53 [20559-18-6] C₂₀H₄₂NO₇P

CMC (H₂O) 0.70 mM

Purity ≥ 99% by HPLC analysis.

pH (1% solution) 5-8

Solubility in water at 0-5°C >10%

Conductance (10% solution) <200 μS

Absorbance of a 1% detergent solution:

340 nm < 0.02

280 nm < 0.08

260 nm < 0.1

L218 LysoFos™ Choline 18, ANAGRADE®

[1-Stearoyl-2-hydroxy-sn-glycero-3-phosphocholine]

FW: 523.69 [19420-57-6] C₂₆H₅₄NO₇P

Purity ≥ 99% by HPLC analysis.

pH (1% solution) 4-9

Solubility in water at 0-5°C >1%

Conductance (1% solution) <500 μS

Absorbance of a 1% detergent solution:

340 nm < 0.1

280 nm < 0.2

260 nm < 0.2

L214 LysoFos™ Choline 14, ANAGRADE®

[1-Myristoyl-2-hydroxy-sn-glycero-3-phosphocholine]

FW: 467.58 [20559-16-4] C₂₂H₄₆NO₇P

CMC (H₂O) 0.070 mM

Purity ≥ 99% by HPLC analysis.

pH (1% solution) 5-8

Solubility in water at 0-5°C >10%

Conductance (10% solution) <200 μS

Absorbance of a 1% detergent solution:

340 nm < 0.02

280 nm < 0.08

260 nm < 0.1

Anatrace