

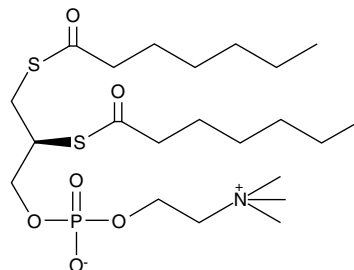
# Product Information



## 1,2-*bis*(heptanoylthio) Glycerophosphocholine

Item No. 62235

**CAS Registry No.:** 89019-63-6  
**Formal Name:** (S)-4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxoheptyl)thio]-3,5-dioxo-9-thia-4-phosphaheptadecan-1-aminium  
**Synonyms:** Diheptanoyl Thio-PC, 1,2-*bis*(Heptanoylthio)-1,2-dideoxy-*sn*-glycero-3-phosphorylcholine  
**MF:** C<sub>22</sub>H<sub>44</sub>NO<sub>6</sub>PS<sub>2</sub>  
**FW:** 513.7  
**Purity:** ≥95%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

For long term storage, we suggest that 1,2-*bis*(heptanoylthio) glycerophosphocholine (diheptanoyl thio-PC) be stored as supplied at -20°C. It should be stable for at least one year.

Diheptanoyl thio-PC is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO or dimethyl formamide purged with an inert gas can be used. The solubility of diheptanoyl thio-PC in these solvents is approximately 50 mg/ml. Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Avoid dissolving diheptanoyl thio-PC in basic solutions, since base treatment promotes hydrolysis of the thioester. If an organic solvent-free solution of diheptanoyl thio-PC is needed it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of diheptanoyl thio-PC in PBS (pH 7.2) is approximately 62 µg/ml. Addition of Triton X-100 will enhance the solubility of diheptanoyl thio-PC significantly.<sup>1</sup> The critical micellar concentration of diheptanoyl thio-PC is 0.17 mM in 0.2 M Tris-maleate (pH 7.4) buffer. We do not recommend storing the aqueous solution for more than one day.

Diheptanoyl thio-PC is a substrate for all phospholipase A<sub>2</sub>s (PLA<sub>2</sub>s) with the exception of cPLA<sub>2</sub> and PAF-acetyl hydrolase.<sup>1</sup> Interaction of this compound with a PLA<sub>2</sub> results in cleavage of the *sn*-2 fatty acid generating a free thiol on the lysophospholipid. This free thiol can be detected using chromogenic substrates such as DTNB (Ellman's reagent) and DTP.<sup>2,3</sup>

### References

1. Roberts, M.F. Phospholipases: Structural and functional motifs for working at an interface. *FASEB J.* **10**, 1159-1172 (1996).
2. Hendrickson, H.S., Hendrickson, E.K., and Dybvig, R.H. Chiral synthesis of a dithiolester analog of phosphatidylcholine as a substrate for the assay of phospholipase A<sub>2</sub>. *J. Lipid Res.* **24**, 1532-1537 (1983).
3. Reynolds, L.J., Hughes, L.L., and Dennis, E.A. Analysis of human synovial fluid phospholipase A<sub>2</sub> on short chain phosphatidylcholine-mixed micelles: Development of a spectrophotometric assay suitable for a microtiter plate reader. *Anal. Biochem.* **204**, 190-197 (1992).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/62235](http://www.caymanchem.com/catalog/62235)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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