

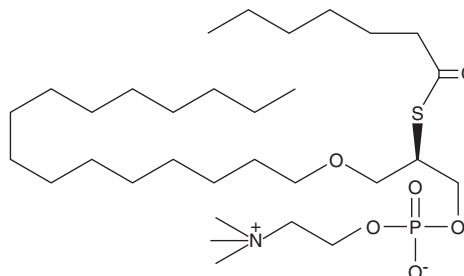
Product Information



Heptanoyl thio-PC

Catalog No. 10006809

Formal Name: 1-O-hexadecyl-2-deoxy-2-thio-R-
(heptanoyl)-*sn*-glyceryl-3-phosphocholine
MF: C₃₁H₆₄NO₆PS
FW: 609.9
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that heptanoyl thio-PC be stored as supplied at -20°C. It will be stable for at least one year.

Heptanoyl 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 and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of heptanoyl thio-PC in DMSO is 2 mg/ml and 10 mg/ml in DMF.

Heptanoyl thio-PC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of heptanoyl thio-PC should be diluted with the aqueous buffer of choice. Heptanoyl thio-PC has a solubility of 0.5 mg/ml in a 1:8 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Thioester analogs of glycerophospholipids, in combination with Ellman's reagent, are convenient colorimetric substrates for the measurement of phospholipase (PL) activity.^{1,2} Diheptanoyl thio-PC is a commonly-used colorimetric substrate for all PLA₂s, with the exception of cPLA₂ and platelet-activating factor acetylhydrolase (PAF-AH).³ Heptanoyl thio-PC is an analog of diheptanoyl thio-PC that contains an ether-linked saturated C₁₆ moiety at the *sn*-1 position rather than a heptanoyl thiol ester. Porcine pancreatic and bee venom sPLA₂ enzymes exhibit 10-13 fold less activity when assayed with heptanoyl thio-PC compared to diheptanoyl thio-PC.⁴ This decrease in activity has not been thoroughly investigated.

References

1. Hendrickson, H.S., Hendrickson, E.K., and Dybvig, R.H. Chiral synthesis of a dithioester analog of phosphatidylcholine as a substrate for the assay of phospholipase A₂. *J. Lipid Res.* **24**, 1532-1537 (1983).
2. Reynolds, L.J., Hughes, L.L., and Dennis, E.A. Analysis of human synovial fluid phospholipase A₂ on short chain phosphatidylcholine-mixed micelles: Development of a spectrophotometric assay suitable for a microtiterplate reader. *Anal. Biochem.* **204**, 190-197 (1992).
3. Roberts, M.F. Phospholipases: Structural and functional motifs for working at an interface. *FASEB J.* **10**, 1159-1172 (1996).
4. Johnson, J. Personal Communication.

Related Products

1,2-*bis*-(heptanoylthio) Glycerophosphocholine - Cat. No. 62235 • Arachidonoyl Thio-PC - Cat. No. 62240 • HEPC - Cat. No. 10006695

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

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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