

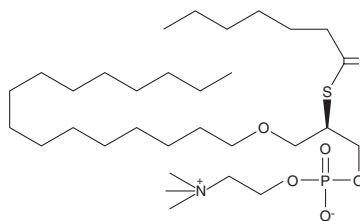
PRODUCT INFORMATION



Heptanoyl thio-PC

Item No. 10006809

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



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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 purged with an inert gas can be used. The solubility of heptanoyl thio-PC in these solvents is approximately 2 and 10 mg/ml, respectively.

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.

Description

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 dithiolester analog of phosphatidylcholine as a substrate for the assay of phospholipase A₂. *J. Lipid Res.* **24(11)**, 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(1)**, 190-197 (1992).
3. Roberts, M.F. Phospholipases: Structural and functional motifs for working at an interface. *FASEB J.* **10(10)**, 1159-1172 (1996).
4. Johnson, J. Personal Communication.

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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