

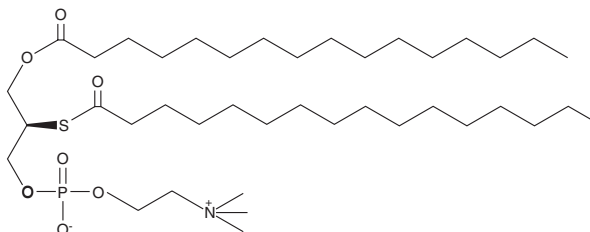
# PRODUCT INFORMATION



## Palmitoyl thio-PC

Item No. 10010521

**CAS Registry No.:** 113881-60-0  
**Formal Name:** 1-O-hexadecanoyl-2-thio-R-(hexadecanoyl)-sn-glycerol-3-phosphocholine  
**MF:** C<sub>40</sub>H<sub>80</sub>NO<sub>7</sub>PS  
**FW:** 750.1  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Palmitoyl thio-PC is supplied as a crystalline solid. A stock solution may be made by dissolving the palmitoyl thio-PC in the solvent of choice, which should be purged with an inert gas. Palmitoyl thio-PC is soluble in the organic solvent ethanol at a concentration of approximately 50 mg/ml.

Palmitoyl thio-PC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, palmitoyl thio-PC should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Palmitoyl thio-PC has a solubility of approximately 0.5 mg/ml in a 1:1 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.<sup>1,2</sup> Palmitoyl thio-PC is a chromogenic PLA<sub>2</sub> substrate that contains a palmitoyl thioester at the sn-2 position of the glycerol backbone. Hydrolysis of the thioester by PLA<sub>2</sub> yields a free thiol that reacts readily with DTNB (Ellman's reagent) giving a bright yellow product with an absorbance maximum at 412 nm. Palmitoyl thio-PC has been used to measure bee venom sPLA<sub>2</sub> activity in a phospholipid:Triton X-100 mixed micelle system.<sup>3</sup>

### 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 A<sub>2</sub>. *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 A<sub>2</sub> on short chain phosphatidylcholine-mixed micelles: Development of a spectrophotometric assay suitable for a microtiterplate reader. *Anal. Biochem.* **204(1)**, 190-197 (1992).
3. Balet, C., Clingman, K.A., and Hajdu, J. 1-palmitoyl-2-thiopalmityl phosphatidylcholine, a highly specific chromogenic substrate of phospholipase A<sub>2</sub>. *Biochem. Biophys. Res. Commun.* **150(2)**, 561-567 (1988).

#### 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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