

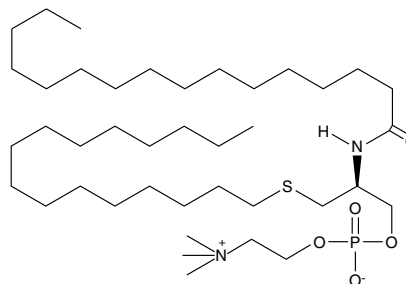
# Product Information



## Thioetheramide-PC

Item No. 62750

**CAS Registry No.:** 116457-99-9  
**Formal Name:** 1,2-dideoxy-1-(S-hexadecyl)thio-2-(N-hexadecanoyl)amino-*sn*-glyceryl-3-phosphorylcholine  
**Synonym:** 1-Palmitylthio-2-palmitoylamido-1,2-dideoxy-*sn*-glycero-3-phosphorylcholine  
**MF:** C<sub>40</sub>H<sub>83</sub>N<sub>2</sub>O<sub>5</sub>PS  
**FW:** 735.1  
**Purity:** ≥95%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

For long term storage, we suggest that thioetheramide-PC be stored as supplied at -20°C, preferably in a desiccator. It will be stable for at least one year.

Thioetheramide-PC is supplied as a solution in ethanol. Thioetheramide-PC is sparingly soluble in organic solvents such as DMSO and dimethyl formamide. Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Prior to performing biological experiments, the ethanolic solution should be reconstituted in buffer containing 4.25 mM Triton X-100.<sup>1</sup> Sonicate until a clear solution is obtained. Thioetheramide-PC remains monomeric in aqueous solutions.<sup>1,2</sup> Store aqueous solutions of thioetheramide-PC on ice and use within 12 hours. We recommend making a fresh preparation each day.

Thioetheramide-PC is an analog of phosphatidylcholine containing a thioether at the *sn*-1 position and an amide at the *sn*-2 position. It is a structurally modified phospholipid that functions as a competitive, reversible inhibitor of secretory phospholipase A<sub>2</sub> (sPLA<sub>2</sub>).<sup>1,2</sup> The IC<sub>50</sub> value for thioetheramide-PC is 2 μM at a substrate concentration of 0.5 mM.<sup>1</sup> In addition to binding to the catalytic site of sPLA<sub>2</sub>, thioetheramide-PC also binds to the activator site of this enzyme. The binding of thioetheramide-PC to the activator site is tighter than its binding to the catalytic site. The result of this dual interaction is that at low concentrations thioetheramide-PC may activate phospholipase activity rather than inhibiting it.<sup>1</sup>

### References

1. Yu, L., Deems, R.A., Hajdu, J., *et al.* The interaction of phospholipase A<sub>2</sub> with phospholipid analogues and inhibitors. *J. Biol. Chem.* **265**, 2657-2664 (1990).
2. Plesniak, L.A., Boegeman, S.C., Segelke, B.W., *et al.* Interaction of phospholipase A<sub>2</sub> with thioether amide containing phospholipid analogues. *Biochemistry* **32**, 5009-5016 (1993).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/62750](http://www.caymanchem.com/catalog/62750)

### Cayman Chemical

**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
[custserv@caymanchem.com](mailto:custserv@caymanchem.com)

**Web**  
[www.caymanchem.com](http://www.caymanchem.com)

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

#### 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 Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 02/14/2014