

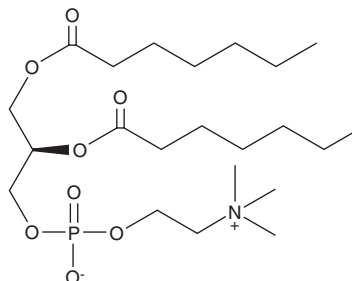
PRODUCT INFORMATION



1,2-Diheptanoyl-*sn*-glycero-3-PC

Item No. 25586

CAS Registry No.: 39036-04-9
Formal Name: (7R)-4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxoheptyl)oxy]-3,5,9-trioxo-4-phosphahexadecan-1-aminium, inner salt, 4-oxide
Synonyms: DHPC-C7, di-C7-PC
MF: C₂₂H₄₄NO₈P
FW: 481.6
Purity: ≥95%
UV/Vis.: λ_{max}: 210 nm
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

1,2-Diheptanoyl-*sn*-glycero-3-PC (DHPC-C7) is supplied as a crystalline solid. A stock solution may be made by dissolving the DHPC-C7 in the solvent of choice. DHPC-C7 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of DHPC-C7 in these solvents is approximately 30, 7, and 20 mg/ml, respectively.

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. Organic solvent-free aqueous solutions of DHPC-C7 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of DHPC-C7 in PBS, pH 7.2, is approximately 250 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

DHPC-C7 is a synthetic phosphatidylcholine containing the short-chain (7:0) heptanoic acid at the *sn*-1 and *sn*-2 positions. It is commonly used in the formation of lipid bilayers and mixed micelles that has a critical micelle concentration (CMC) of 1.6 mM.^{1,2} Short-chain phospholipids, such as DHPC-C7 and 1,2-dihexanoyl-*sn*-glycero-PC (DHPC-C6; Item No. 25585), increase the formation rate of substrate-supported planar phospholipid bilayers on glass and silica.² DHPC-C7 inhibits insulin fibril formation *in vitro* in a concentration-dependent manner and inhibits cytotoxicity induced by insulin fibril formation in PC12 and SH-SY5Y cells when used at concentrations ranging from 0.5 to 4 mM.³

References

1. Faustino, C.M.C., Calado, A.R.T., and Garcia-Rio, L. Mixed micelle formation between amino acid-based surfactants and phospholipids. *J. Colloid. Interface Sci.* **359(2)**, 493-498 (2011).
2. Morigaki, K., Kimura, S., Okada, K., *et al.* Formation of substrate-supported membranes from mixtures of long- and short-chain phospholipids. *Langmuir* **28(25)**, 9649-9655 (2012).
3. Wang, S.S.-S., Liu, K.-N., and Han, T.-C. Amyloid fibrillation and cytotoxicity of insulin are inhibited by the amphiphilic surfactants. *Biochim. Biophys. Acta.* **1802(6)**, 519-530 (2010).

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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