

# PRODUCT INFORMATION



## 1-Stearoyl-2-Oleoyl-*sn*-glycero-3-PC

Item No. 38152

**CAS Registry No.:** 56421-10-4  
**Formal Name:** (7R)-4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[[(9Z)-1-oxo-9-octadecen-1-yl]oxy]-3,5,9-trioxa-4-phosphaheptacosan-1-aminium, 4-oxide, inner salt

**Synonyms:** 1-Octadecanoyl-2-(9Z)-Octadecenoyl-*sn*-glycero-3-Phosphatidylcholine, 1-Octadecanoyl-2-(9Z)-Octadecenoyl-*sn*-glycero-3-Phosphocholine, 18:0/18:1-PC, PC(18:0/18:1), 1,2-SOPC, L- $\alpha$ -1-Stearoyl-2-Oleoylphosphatidylcholine

**MF:** C<sub>44</sub>H<sub>86</sub>NO<sub>8</sub>P

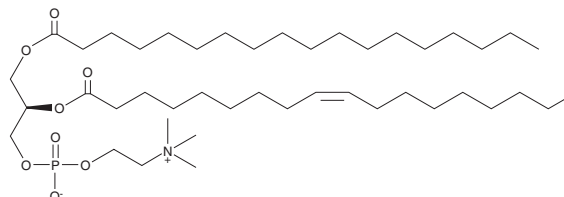
**FW:** 788.1

**Purity:** ≥95%

**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-Stearoyl-2-oleoyl-*sn*-glycero-3-PC is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-stearoyl-2-oleoyl-*sn*-glycero-3-PC in the solvent of choice, which should be purged with an inert gas. 1-Stearoyl-2-oleoyl-*sn*-glycero-3-PC is soluble in the organic solvent ethanol at a concentration of approximately 30 mg/ml.

### Description

1-Stearoyl-2-oleoyl-*sn*-glycero-3-PC is a phospholipid containing stearic acid (Item No. 10011298) and palmitic acid (Item No. 10006627) at the *sn*-1 and *sn*-2 positions, respectively.<sup>1</sup> It has been used in the generation of lipid nanoparticles (LNPs) for the delivery of plasmid DNA *in vitro*.<sup>2</sup> Liposomes containing 1-stearoyl-2-oleoyl-*sn*-glycero-3-PC and encapsulating the acetylcholinesterase (AChE) reactivator HI-6 (asoxime; Item No. 18607) increase the cerebral AChE reactivation rate by 10% compared with HI-6 alone in a mouse model of brain poisoning induced by the organophosphate nerve agent soman.<sup>3</sup> It has also been found in whey protein phospholipid concentrate (WPPC).<sup>4</sup>

### References

1. Tada, K., Goto, M., Tamai, N., *et al.* Pressure effect on the bilayer phase transition of asymmetric lipids with an unsaturated acyl chain. *Ann. N. Y. Acad. Sci.* **1189**(1), 77-85 (2010).
2. Li, Z., Carter, J., Santos, L., *et al.* Acidification-induced structure evolution of lipid nanoparticles correlates with their *in vitro* gene transfections. *ACS Nano* **17**(2), 979-990 (2023).
3. Li, Y., Zhang, Z., Huang, J., *et al.* A fast-acting brain-targeted nano-delivery system with ultra-simple structure for brain emergency poisoning rescue. *Nanoscale* **15**(10), 4852-4862 (2023).
4. Ferraris, Q., Alcazar, A., and Qian, M.C. Profiling polar lipids in whey protein phospholipid concentrate by LC-HRMS/MS. *Food Chem.* **374**, 131495 (2022).

#### 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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