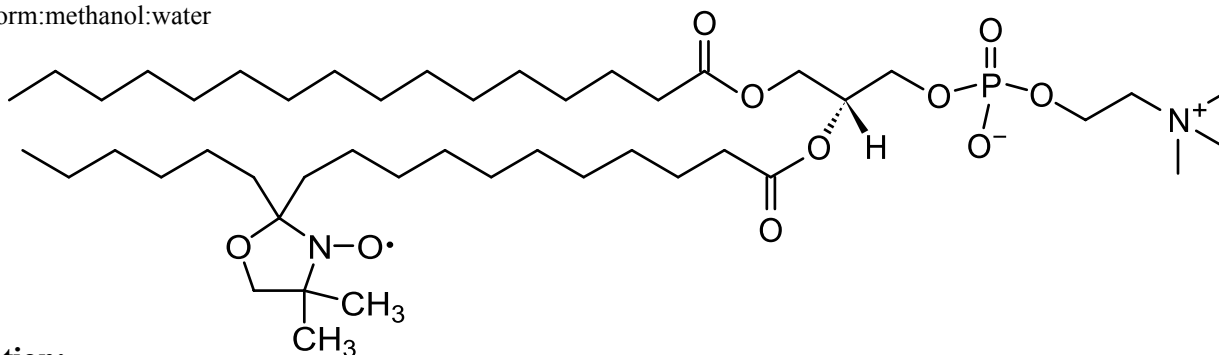


TECHNICAL DATA SHEET

1-Palmitoyl-2-Stearoyl-(12-DOXYL)-*sn*-Glycero-3-Phosphocholine

Catalog Number	810600	Physical state	Powder; chloroform solution
Purity	> 99%	Transition temp.	No data
CAS	217499-54-2	CMC	No data
Synonyms	16:0-12 DOXYL PC	PKA	No data
Molec. Formula	C ₄₆ H ₉₀ N ₂ O ₁₀ P	TLC mobile phase	C:M:W*, 65:25:4, v/v
MW	862.188	Exact Mass	861.633
Percent composition	C 64.08% H 10.52% N 3.25% O 18.56% P 3.59%		
Stability	Store in <-20°C freezer for up to six months. Unstable in solvents containing dilute mineral acid.		
Solubility	Soluble in chloroform, methanol and ethanol. Insoluble in water and acetone.		
Web link	810600		

* chloroform:methanol:water



Description:

Avanti's nitroxide spin product listing is a group of compounds designed to act as membrane probes. A variety of positions down the hydrophobic chain are labeled with the nitroxide functional groups to allow probing the membrane at various depths. These compounds have been synthesized from 1-palmitoyl-2-hydroxy-*sn*-glycerol-3-phosphocholine with the product being purified by column chromatography. Various *n*-doxyl phosphocholines have been recently used as biophysical tools to elucidate membrane trafficking with phosphatidylinositol transfer proteins (Smirnova et al, 2007) and as fluorescent quenchers in lipid bilayer structural studies (Kondo et al, 2008).

Product use:

To prevent aggregation, prepare water-based solutions of 2 mM stock solutions of *n*-DOXYL PCs and store in plastic. Dilute stock solutions to 0.03- 0.1 mM solutions for EPR studies (Wu and Gaffney, 2006). For liposome preparations in fluorescent quenching measurements, dissolve the doxyl lipid in 150 µl absolute ethanol for a concentration of 40.3 mM (Kondo et al, 2008, supplemental info found at http://pubs.acs.org/doi/suppl/10.1021/ja804929m/suppl_file/ja804929m_si_001.pdf).

References:

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- Wu F, Gaffney BJ (2006) Dynamic behavior of fatty acid spin labels within a binding site of soybean lipoxygenase-1. *Biochem* 45(41): 12510-8
- Alaouie AM, Smirnov AI (2006) Ultra-stable temperature control in EPR experiments: thermodynamics of gel-to-liquid phase transition in spin-labeled phospholipid bilayers and bilayer perturbations by spin labels. *J Magn Reson.* 182(2):229-38
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- Dejongh HH, Hemminga MA, Marsh D (1990) ESR of spin-labeled bacteriophage M13 coat protein in mixed phospholipid bilayers. *Biochem Biophys Acta* 1024: 82-88

Related Products: **DOXYL PC's** **TEMPO PC's**

MSDS: available on Avanti's website for product number 810600

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