

Product Data Sheet

Product Name: Glycerophosphoglycerol

Cat. No.: GC78560

Chemical Properties

Cas. No. 6418-92-4

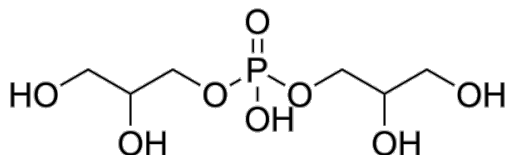
Formula $C_6H_{15}O_8P$ M.Wt 246.15

Solubility DMSO: 50 mg/mL(203.13 mM; Need ultrasonic) Storage -20°C, sealed storage, away from moisture

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Glycerophosphoglycerol is a precursor for complex phospholipids, including the cardiolipins in mitochondria, which can form abundant negative ions ^[1]. Glycerophosphoglycerol is the main component of the cell membrane of Gram-negative bacteria, whose transport between the inner and outer membranes is bidirectional, and Glycerophosphoglycerol is crucial for maintaining the stability of the cell membrane and the survival of the bacteria ^[2]. Glycerophospholipids, through promoting the synthesis of phospholipids, help in the reconstruction and proliferation of tumor cell membranes,

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which can be used to assess the glycolytic activity of breast cancer cells^[3]. Glycerophosphoglycerol is widely used as a substrate to detect the hydrolytic activity of glycerol phosphate diester phosphatase from *Escherichia coli*^[4].

References:

- [1] Pulfer M, Murphy R C. Electrospray mass spectrometry of phospholipids[J]. Mass spectrometry reviews, 2003, 22(5): 332-364.
- [2] Sun L, Zhang Y, Cai T, et al. CrrAB regulates PagP-mediated glycerophosphoglycerol palmitoylation in the outer membrane of *Klebsiella pneumoniae*[J]. Journal of Lipid Research, 2022, 63(9).
- [3] Hutschenreuther A, Birkenmeier G, Bigl M, et al. Glycerophosphoglycerol, beta-alanine, and pantothenic acid as metabolic companions of glycolytic activity and cell migration in breast cancer cell lines[J]. Metabolites, 2013, 3(4): 1084-1101.
- [4] Larson T J, van Loo-Bhattacharya A T. Purification and characterization of glpQ-encoded glycerophosphodiester phosphodiesterase from *Escherichia coli* K-12[J]. Archives of biochemistry and biophysics, 1988, 260(2): 577-584.

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