

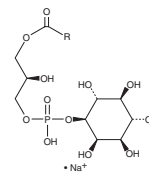
PRODUCT INFORMATION



Lysophosphatidylinositol (porcine liver) (sodium salt)

Item No. 26016

Purity:	≥95% (mixture of compounds)
Supplied as:	A 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

Lysophosphatidylinositol (porcine liver) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the lysophosphatidylinositol (porcine liver) (sodium salt) in the solvent of choice, which should be purged with an inert gas. Lysophosphatidylinositol (porcine liver) (sodium salt) is soluble in chloroform.

Description

Lysophosphatidylinositols (LPIs) are bioactive lysophospholipids formed via phospholipase A₁ (PLA₁) or PLA₂ catabolism of phosphatidylinositol (Item No. 24523).¹ They are produced in a variety of cells including human platelets, endothelial cells, and neutrophils and are found in the central and peripheral nervous system.² LPIs containing stearic acid (Item No. 10011298) are the primary form found in rat brain followed by LPIs containing arachidonic acid (Item Nos. 90010 | 10006607), and both are agonists of the G protein-coupled receptor GPR55, with 2-arachidonoyl LPI having higher activity than 2-stearoyl LPI.¹ LPIs also induce exocytotic release of insulin by pancreatic islet cells and intracellular calcium mobilization in a variety of cells, as well as increase ERK1/2, Akt, and p38 phosphorylation via GPR55 activation.^{2,3} LPIs accumulate in transformed cell lines due to increased PLA₂ activity and blood levels are higher in patients with ovarian or peritoneal cancers compared with healthy controls.^{1,2} This product contains lysophosphatidylinositol molecular species with variable fatty acyl chain lengths at the sn-1 position and a hydroxy group in the sn-2 position.

References

1. Yamashita, A., Oka, S., Tanikawa, T., *et al.* The actions and metabolism of lysophosphatidylinositol, an endogenous agonist for GPR55. *Prostaglandins Other Lipid Mediat.* **107**, 103-116 (2013).
2. Piñeiro, R. and Falasca, M. Lysophosphatidylinositol signalling: New wine from an old bottle. *Biochim. Biophys. Acta* **1821(4)**, 694-705 (2012).
3. Metz, S.A. Lysophosphatidylinositol, but not lysophosphatidic acid, stimulates insulin release. A possible role for phospholipase A₂ but not *de novo* synthesis of lysophospholipid in pancreatic islet function. *Biochem. Biophys. Res. Commun.* **138(2)**, 720-727 (1986).

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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