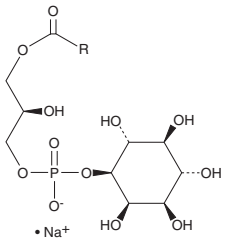
PRODUCT INFORMATION

Lysophosphatidylinositol (soy) (sodium salt)

Item No. 46537

CAS Registry No.: 796963-91-2
Synonyms: LPI (soy), L-α-Lysophosphatidylinositol, Lyso-PI (soy)
MF: $C_{25}H_{48}O_{12}P$ • Na (for palmitoyl)
FW: 594.6
Purity: ≥98%
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 (LPI) (soy) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the LPI (soy) (sodium salt) in the solvent of choice, which should be purged with an inert gas. LPI (soy) (sodium salt) is soluble in DMSO.

Description

LPIs are bioactive lysophospholipids formed *via* phospholipase A_1 (PLA_1) or PLA_2 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 | 90010.1 | 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 PLA_2 activity, and blood levels are higher in patients with ovarian or peritoneal cancers.[1,2] Lysophosphatidylinositols (soy) contains lysophosphatidylinositol molecular species with primarily C16:0 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 A_2 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.

WARRANTY AND LIMITATION OF REMEDY
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