

PRODUCT INFORMATION



Polar Lipid Mixture (egg, ovine)

Item No. 29374

Supplied as: A solution in chloroform:methanol (2:1)
Storage: -20°C
Stability: ≥2 years
Concentration: 25 mg/ml

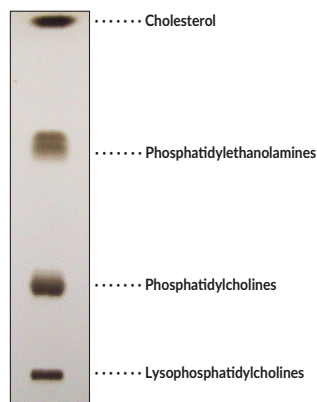
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description and Data

Cholesterol is a major sterol produced in mammalian cells that is required for cell viability and proliferation.¹ It is a component of mammalian cell membranes that interacts with membrane phospholipids, sphingolipids, and proteins to influence their behavior. Phosphatidylethanolamine is the most abundant phospholipid in prokaryotes and the second most abundant found in the membrane of mammalian, plant, and yeast cells, comprising approximately 25% of total mammalian phospholipids.² Phosphatidylcholine is the most abundant phospholipid in mammalian, plant, and yeast cells.³ It is found mainly in the outer leaflet of cell membranes and can make up approximately half of the total phospholipids.⁴ In mammalian tissues, phosphatidylcholine commonly contains a saturated and unsaturated fatty acid at the C-1 and C-2 positions of glycerol, respectively. It is a substrate for various enzymes and has a role in cell signaling. Lysophosphatidylcholines are produced by hydrolysis of the fatty acid of phosphatidylcholine.⁵ They have effects on a variety of cell types, including smooth muscle cells, endothelial cells, T lymphocytes, monocytes, and macrophages among others. Lysophosphatidylcholines are a major phospholipid component of oxidized low-density lipoprotein (ox-LDL), and they accumulate in animal models of atherosclerosis. Polar Lipid Mixture contains cholesterol, hydroxy- and non-hydroxy phosphatidylethanolamines, phosphatidylcholines, and lysophosphatidylcholines. It is intended for use as a reference standard for the detection of these polar lipids in various sample types by TLC, LC-, or GC-MS.

Included are:

Elution Order*	Item Name
1	Cholesterol
2	Phosphatidylethanolamines
3	Phosphatidylcholines
4	Lysophosphatidylcholines



References

1. Ohvo-Rekilä, H., Ramstedt, B., Leppimäki, P., *et al.* *Prog. Lipid Res.* **41(1)**, 66-97 (2002).
2. Vance, J.E. and Tasseva, G. *Biochim. Biophys. Acta* **1831(3)**, 543-554 (2013).
3. Vance, J.E. *J. Lipid Res.* **49(7)**, 1377-1387 (2008).
4. Billah, M.M. and Anthes, J.C. *Biochem. J.* **269(2)**, 281-291 (1990).
5. Matsumoto, T., Kobayashi, T., and Kamata, K. *Curr. Med. Chem.* **14(30)**, 3209-3220 (2007).

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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