

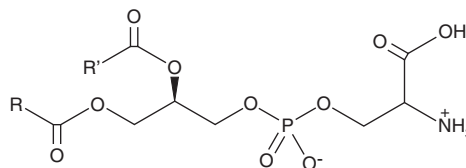
PRODUCT INFORMATION



Phosphatidylserine (bovine)

Item No. 24341

CAS Registry No.: 1446756-47-3
Synonym: PtdSers (bovine)
MF: C₄₂H₇₈NO₁₀P (for oleoyl)
FW: 788.1
Purity: ≥98%
Supplied as: A solution in chloroform
Storage: -20°C
Stability: ≥2 years



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

Description

Phosphatidylserine is a naturally occurring phospholipid that comprises 2-10% of total phospholipids in mammals and is enriched in the central nervous system, particularly the retina.¹ It is anionic and found mainly on the inner leaflet of the cell membrane. It is biosynthesized from phosphatidylcholine (Item Nos. 24343 | 24370) or phosphatidylethanolamine (Item No. 24332) by phosphatidyl synthase 1 (PSS1) or PSS2, respectively, in the endoplasmic reticulum and can be reversibly converted back by the same enzymes. It can also be irreversibly converted to phosphatidylethanolamine by phosphatidylserine decarboxylase in the mitochondria. Phosphatidylserine binds to T cell immunoglobulin mucin type 1 (TIM-1) and TIM-4 receptors as well as brain-specific angiogenesis inhibitor 1 (BAI1), leading to anti-inflammatory and anti-atherosclerotic effects.² It is also a cofactor involved in the activation of various signaling pathways through activation of protein kinase C, neutral sphingomyelinase, and c-Raf-1 protein kinase among others.¹ Phosphatidylserine is externalized during apoptosis by scramblases in the plasma membrane as a signal for phagocytes to engulf the cell.³ This product contains phosphatidylserine molecular species with primarily C18:0 fatty acyl chain lengths.

References

1. Vance, J.E. Phosphatidylserine and phosphatidylethanolamine in mammalian cells: Two metabolically related aminophospholipids. *J. Lipid Res.* **49(7)**, 1377-1387 (2008).
2. Darabi, M. and Kontush, A. Phosphatidylserine in atherosclerosis. *Curr. Opin. Lipidol.* **27(4)**, 414-420 (2016).
3. Segawa, K. and Nagata, S. An apoptotic 'eat me' signal: Phosphatidylserine exposure. *Trends Cell Biol.* **25(11)**, 639-650 (2015).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM