

# PRODUCT INFORMATION



## Phosphatidylethanolamine (soy)

Item No. 25845

CAS Registry No.: 97281-51-1

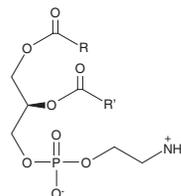
Synonyms: LPI, PE (soy)

Purity:  $\geq 98\%$

Supplied as: A solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

Phosphatidylethanolamine (soy) is supplied as a solid. A stock solution may be made by dissolving the phosphatidylethanolamine (soy) in the solvent of choice, which should be purged with an inert gas. Phosphatidylethanolamine (soy) is soluble in the organic solvent chloroform.

### Description

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.<sup>1</sup> In the brain, phosphatidylethanolamine comprises almost half of the total phospholipids. It is synthesized mainly through the cytidine diphosphate-ethanolamine and phosphatidylserine decarboxylation pathways, which occur in the endoplasmic reticulum (ER) and mitochondrial membranes, respectively. It is a precursor in the synthesis of phosphatidylcholine and arachidonoyl ethanolamide (AEA; Item No. 90050) and is a source of ethanolamine used in various cellular functions. In *E. coli*, phosphatidylethanolamine deficiency prevents proper assembly of lactose permease, suggesting a role as a lipid chaperone.<sup>2</sup> It is a cofactor in the propagation of prions *in vitro* and can convert recombinant mammalian proteins into infectious molecules even in the absence of RNA.<sup>3</sup> This product contains phosphatidylethanolamine molecular species with variable fatty acyl chain lengths at the *sn*-1 and *sn*-2 positions.

### References

1. Vance, J.E. and Tasseva, G. Formation and function of phosphatidylserine and phosphatidylethanolamine in mammalian cells. *Biochim. Biophys. Acta* **1831(3)**, 543-554 (2013).
2. Bogdanov, M., Sun, J., Kaback, H.R., *et al.* A phospholipid acts as a chaperone in assembly of a membrane transport protein. *J. Biol. Chem.* **271(20)**, 11615-11618 (1996).
3. Deleault, N.R., Piro, J.R., Walsh, D.J., *et al.* Isolation of phosphatidylethanolamine as a solitary cofactor for prion formation in the absence of nucleic acids. *Proc. Natl. Acad. Sci. U.S.A.* **109(22)**, 8546-8551 (2012).

#### 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