

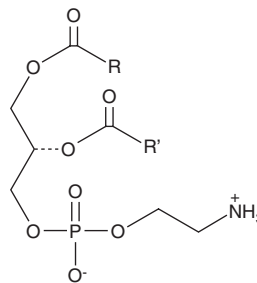
# PRODUCT INFORMATION



## Phosphatidylethanolamine (chicken egg)

Item No. 24332

**CAS Registry No.:** 39382-08-6  
**Synonym:** PE (egg)  
**MF:** C<sub>41</sub>H<sub>78</sub>NO<sub>8</sub>P (for oleoyl)  
**FW:** 744.0  
**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

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 (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 phosphatidylcholine molecular species with primarily C16:0 and C18:1 fatty acyl chain lengths.

### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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