

## Product Data Sheet

Product Name: Phosphatidylethanolamines (soy)

Cat. No.: GC18560

### Chemical Properties

Cas. No. 97281-51-1

SMILES [R]C(OC[C@@H](OC([R])=O)COP([O-])(OCC[NH3+])=O)=O

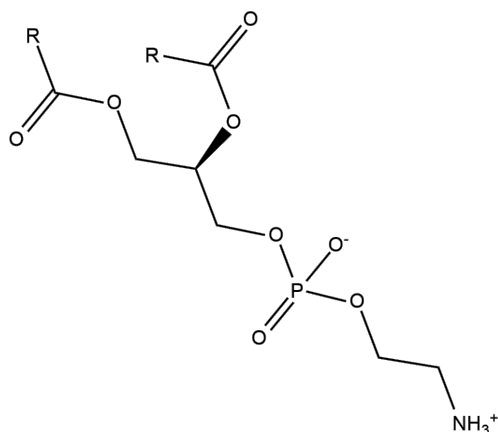
Formula M.Wt

Solubility Chloroform: Soluble Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

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. 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 and is a source of ethanolamine used in various cellular functions. In *E. coli*, phosphatidylethanolamine deficiency prevents proper assembly of lactose permease, suggesting

**Caution: Product has not been fully validated for medical applications. For research use only.**

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a role as a lipid chaperone. 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.

Phosphatidylethanolamines (soy) is a mixture of phosphatidylethanolamines isolated from soy with various fatty acyl groups 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).

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