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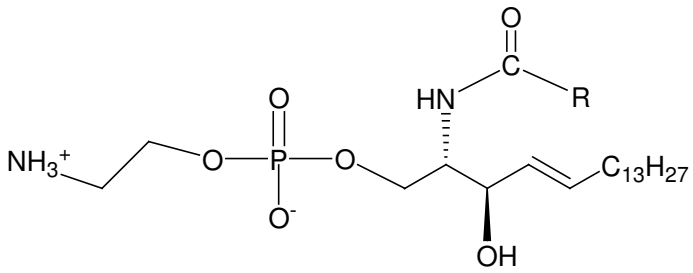
PRODUCT DATA SHEET

N-Acyl-D-*erythro*-sphingosylphosphorylethanolamine

Catalog No: 1327
Common Name: Ceramide phosphorylethanolamine
Source: semisynthetic, bovine buttermilk
Solubility: chloroform/methanol (2:1 by vol.)
CAS No: N/A

Molecular Formula: $C_{43}H_{87}N_2O_6P$
Molecular Weight: 773 (tricosanoyl)
Storage: -20°C
Purity: TLC > 98%; identity confirmed by MS
TLC System: chloroform/methanol/water (65:25:4 by vol.)
Appearance: solid



Application Notes:

Sphingosylphosphorylethanolamine is analogous to sphingomyelin, containing an ethanolamine headgroup rather than a choline headgroup, and is thought to have similar structural functions. It has been found in some marine invertebrates, anaerobic bacteroides, some insects, and in the eukaryotic microorganism Oomycete but not in plants or mammals. It is thought that sphingosylphosphorylethanolamine may be produced when there is a lack of choline to make sphingomyelin[1] and that it is probably localized in the plasma membrane, similar to sphingomyelin.[2] The enzyme phosphatidylethanolamine:ceramide-phosphorylethanolamine transferase is deactivated by phospholipase C treatment but not by phospholipase A2 or phospholipase D.[3]

Selected References:

1. R. Dawson and P. Kemp "Isolation of Ceramide Phosphorylethanolamine from the Blowfly Calliphora erythrocephala" *Journal of Biochemistry*, Vol. 106 pp. 319-320, *1968*
2. R. Moreau et al. "Identification of Ceramide-Phosphorylethanolamine in Oomycete Plant Pathogens: *Pythium ultimum, Phytophthora infestans,* and *Phytophthora capsici*" *Lipids*, Vol. 33(3) pp.307-317, *1998*
3. M. Nikolova, D. Petkova, K. Koumanov "Influence of phospholipid environment on the phosphatidylethanolamine: ceramide-phosphorylethanolamine transferase activity in rat liver plasma membranes." *International Journal of Biochemistry*, Vol. 24(3) pp. 447-453, *1992*