N-Tricosanoyl ceramide trihexoside

Catalog No: 1524
Common Name: N-C23:0-Ceramide trihexoside; N-Tricosanoyl globotriaosylceramide
Source: semisynthetic, porcine RBC
Solubility: chloroform/methanol (2:1)
Molecular Formula: C_{59}H_{111}NO_{18}
Molecular Weight: 1123
TLC System: chloroform/methanol/DI water (65:25:3 by Vol.)
Appearance: solid

Application Notes:

This product is a well-defined ceramide trihexoside containing a tricosanoic fatty acid acyl group on the sphingosine. Ceramide trihexoside is a glycosphingolipid found mostly in mammalian cell membranes. It is involved in cellular signaling and has been identified as a receptor for various toxins including shiga toxins and shiga-like toxins. Some toxins, such as verotoxins from *Escherichia coli*, require specific fatty acids on the ceramide portion of CTH to show affinity in binding. An accumulation of CTH in the cellular membranes due to a lack of alpha-galactosidase to convert it into lactosyl ceramide results in Fabry disease.

This product can be used as an excellent standard for the identification of CTH in Fabry disease by HPLC and mass spectrometry. An inability to convert CTH to globoside due to mutations in the gene sequence leads to the P^{K} Blood Group Phenotype. It appears that under certain conditions CTH can enhance anticoagulant activity. CTH has also been studied as a tool to investigate lymphocyte activation.

Selected References:


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