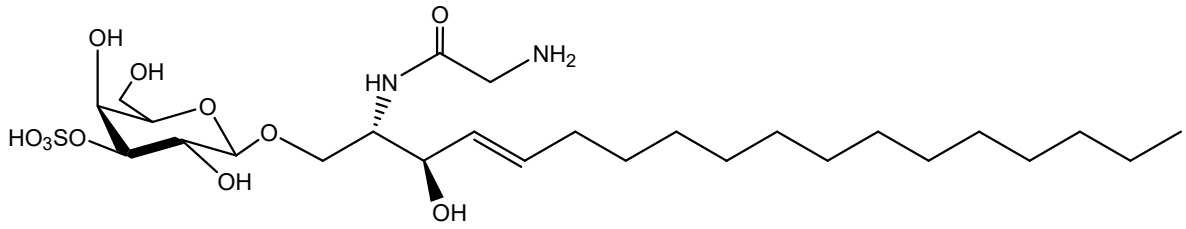
PRODUCT DATA SHEET

MATREYA LLC
Lipids and Biochemicals
A Cayman Chemical Company

N-Glycinated *lyso*-sulfatide

Catalog No: 2092
Common Name: N-Glycinated sphingosine-1-galactoside-3-sulfate
Source: semisynthetic
Solubility: chloroform/methanol/water 70:30:4; ethanol
CAS No: N/A
Molecular Formula: $C_{26}H_{50}N_2O_{11}S$

Molecular Weight: 599
Storage: -20°C
Purity: TLC > 98%; identity confirmed by MS
TLC System: chloroform/methanol/DI water/2.5M ammonium hydroxide (65:25:3:2 by vol.)
Appearance: solid



Application Notes:

N-Glycinated *lyso*-sulfatide is an analogue of the important biomolecule *lyso*-sulfatide. It is ideal for use as an internal standard in the extraction and mass spectrometry analysis of *lyso*-sulfatide from natural samples.[1] The free amine group gives this product very similar physical characteristics to the natural glycolipid while the glycine adds an additional 57 units to the molecule making it easy to detect by mass spectroscopy.

Sulfatide is a type of sulfolipid that is found primarily in the central nervous system and is a myelin-specific sphingolipid. A deficiency of sulfatide in white and gray matter has been associated with Alzheimer's disease and other types of dementia. Apoliprotein E plays an important regulating role in the metabolism of sulfatides.[2] A production of anti-sulfatide antibodies in the cerebrospinal fluid, leading to a deficiency in sulfatides, may be a cause of degeneration of the myelin sheath, leading to multiple sclerosis.[3] Metachromatic leukodystrophy is an inherited disorder characterized by a deficiency of the lysosomal enzyme arylsulfatase A and the subsequent accumulation of sulfatide in neural and visceral tissues.[4] An immunomodulatory role for sulfatides has been suggested in the pathogenesis of tuberculosis.

Selected References:

1. R. Krüger et al. Quantification of the Fabry marker lysoGb3 in human plasma by tandem mass spectrometry. *Journal of Chromatography B*., Vol. 883-884, pp. 128-135, 2012
2. H. Cheng, Y. Zhou, D. Holtzman, X. Han "Apolipoprotein E mediates sulfatide depletion in animal models of Alzheimer's disease." *Neurobiology of Aging, 2008*
3. R. Halder, A. Jahng, I. Maricic and V. Kumar "Mini Review: Immune Response to Myelin-Derived Sulfatide and CNS-Demyelination" *Neurochemical Research*, Vol. 32(2) pp. 257, *2007*
4. P. Whitfield et al. "Characterization of Urinary Sulfatides in Metachromatic Leukodystrophy Using Electrospray Ionization-Tandem Mass Spectrometry" *Molecular Genetics and Metabolism*, Vol. 73(1) pp. 30, *2001*

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.

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