

PRODUCT DATA SHEET

Sulfatides

Catalog No: 1049

Common Name: Ceramide-galactoside-3-sulfate; Cerebroside sulfate

Source: natural, bovine spinal cord

Solubility: chloroform/ methanol/ DI water
(2:1:0.1 by vol.)

(If needed, a few drops of acetic acid)

CAS No: 85496-63-5

Molecular Formula: C₄₂H₈₀NNaO₁₁S

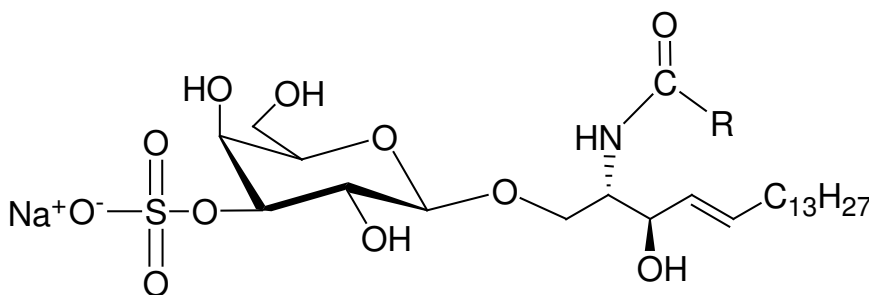
Molecular Weight: 830 (stearoyl, Na⁺ salt)

Storage: -20°C

Purity: TLC: >98%

TLC System: chloroform/ methanol/ DI water
(65:25:4 by vol.)

Appearance: solid



Application notes:

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. Apolipoprotein E plays an important regulating role in the metabolism of sulfatides.¹ 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.² 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.³ An immunomodulatory role for sulfatides has been suggested in the pathogenesis of tuberculosis.

Selected References:

1. H. Cheng, Y. Zhou, D. M. Holtzman, X. Han "Apolipoprotein E mediates sulfatide depletion in animal models of Alzheimer's disease." *Neurobiology of Aging* August 2008
2. Ramesh C. Halder, A. Jahng, I. Maricic and Vipin Kumar "Mini Review: Immune Response to Myelin-Derived Sulfatide and CNS-Demyelination" *Neurochemical Research*, February, Vol. 32(2): 257, 2007
3. Phillip D. Whitfield, Peter C. Sharp, David W. Johnson, Paul Nelson and Peter J. Meikle "Characterization of Urinary Sulfatides in Metachromatic Leukodystrophy Using Electrospray Ionization-Tandem Mass Spectrometry" *Molecular Genetics and Metabolism*, May Vol. 73(1): 30, 2001

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