

PRODUCT DATA SHEET

N-Tetracosanoyl-sulfatide

Catalog No: 1888

Common Name: N-C24:0-Sulfatide; N-Tetracosanoyl-sphingosyl-beta-D-galactoside-3-sulfate; N-Lignoceroyl-sulfatide

Source: semisynthetic, bovine

Solubility: chloroform/methanol (5:1)

CAS No: N/A

Molecular Formula: C₄₈H₉₃NO₁₁S

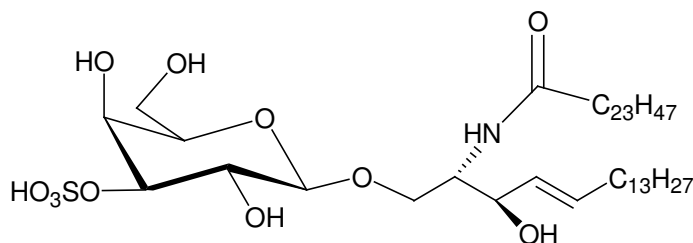
Molecular Weight: 892

Storage: -20°C

Purity: TLC > 98%; identity confirmed by MS

TLC System: chloroform/methanol/DI water (60:30:4 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. Sulfatides decrease the in vitro production of proinflammatory cytokines. Tetracosanoyl sulfatide is the predominant natural sulfatide species.⁴

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
4. D. Zajonc et al. "Structural basis for CD1d presentation of a sulfatide derived from myelin and its implications for autoimmunity" *The Journal of Experimental Medicine*, Vol. 202(11) pp. 1517, 2005

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