

Product Data Sheet

Product Name: C18 3'-sulfo Galactosylceramide-d₃ (d18:1/18:0-d₃)

Cat. No.: GC46985

Chemical Properties

Cas. No. N/A

SMILES O[C@@H]1[C@@H](OS(O)(=O)=O)[C@@H](O)[C@@H](CO)O[C@H]1OC[C@H](NC(CCCCCCCCCCCCCCCCCC([2H])([2H])[2H])=O)[C@H](O)/C=C/CCCCCCCCCCCCC

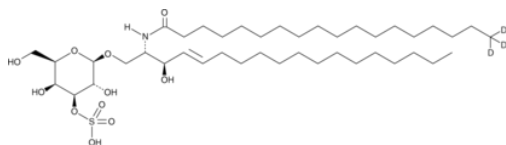
Formula C₄₂H₇₈D₃NO₁₁S M.Wt 811.2

Solubility Chloroform:Methanol:Water (2:1:0.1): Storage Store at -20°C
soluble

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

C18 3'-sulfo Galactosylceramide-d₃ is intended for use as an internal standard for the quantification of C18 3'-sulfo galactosylceramide by GC- or LC-MS. C18 3'-sulfo Galactosylceramide is a minor endogenous sphingolipid produced from C18 ceramide and UDP-galactose in the endoplasmic reticulum followed by sulfation in the Golgi apparatus.¹ It is found in pro-oligodendroblasts and in neurons and accumulates in the lysosome of patients with metachromatic leukodystrophy, a disorder characterized by arylsulfatase A deficiency.^{2,1,3} C18 3'-sulfo Galactosylceramide also increases expression of indoleamine 2,3-dioxygenase 1 (DOX1) to catalyze the initial and rate-limiting step in kynurenine pathway tryptophan catabolism in antigen presenting cells to regulate several immune responses.¹ [Matreya, LLC. Catalog No. 1536]

1. Takahashi, T., and Suzuki, T. Role of sulfatide in normal and pathological cells and tissues. *J. Lipid Res.* 53(8):1437-1450 (2012)
 2. Saville, J.T., Smith, N.J.C., Fletcher, J.M., et al. Quantification of plasma

Caution: Product has not been fully validated for medical applications. For research use only.

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sulfatides by mass spectrometry: Utility for metachromatic leukodystrophy Anal. Chim. Acta 955:79-85 (2017) 3. Svennerholm, L., and StÅllberg-Stenhagen, S. Changes in the fatty acid composition of cerebroside and sulfatides of human nervous tissue with age J. Lipid Res. 9(2):215-225 (1968)

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