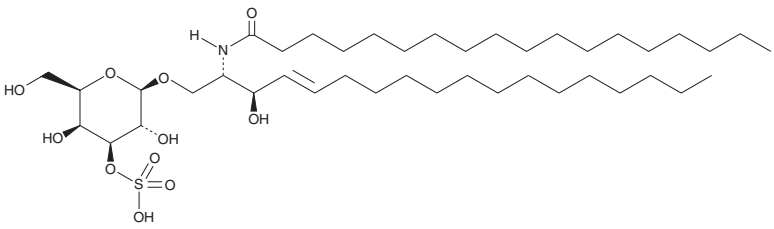
PRODUCT INFORMATION

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

Item No. 24863

CAS Registry No.: 244215-65-4
Formal Name: N-[(1S,2R,3E)-2-hydroxy-1-[[(3-O-sulfo-β-D-galactopyranosyl)oxy]methyl]-3-heptadecen-1-yl]-octadecanamide
Synonyms: 3'-sulfo Galactosylceramide (d18:1/18:0), (3'-sulfo)Galβ-Cer(d18:1/18:0), C18 Sulfatide, N-Octadecanoyl Sulfatide
MF: $C_{42}H_{81}NO_{11}S$
FW: 808.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

C18 3'-sulfo Galactosylceramide (d18:1/18:0) is supplied as a solid. A stock solution may be made by dissolving the C18 3'-sulfo Galactosylceramide (d18:1/18:0) in the solvent of choice. C18 3'-sulfo galactosylceramide (d18:1/18:0) is soluble in a 5:1 solution of chloroform:methanol.

Description

C18 3'-sulfo Galactosylceramide is a member of the sulfatide class of glycolipids. It is a minor endogenous sphingolipid produced from C18 ceramide (Item No. 19556) and UDP-galactose in the endoplasmic reticulum followed by sulfation in the Golgi apparatus.[1] C18 3'-sulfo Galactosylceramide levels are increased in brain tissue isolated from mice with an arylsulfatase A deficiency (ASA-KO), particularly in lipid raft fractions.[2,3] Plasma levels of C18 3'-sulfo galactosylceramide positively correlate with disability progression in patients with relapsing-remitting multiple sclerosis using the Expanded Disability Status Scale.[4] It is also increased in plasma from patients with metachromatic leukodystrophy (MLD).[5] Brain levels of short-chain sulfatides, including C18 3'-sulfo galactosylceramide, decrease with age in mice and humans.[6,7] *As this product is derived from a natural source, there may be variations in the sphingoid backbone.*

References

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. Isaac, G., Pernber, Z., Gieselmann, V., *et al.* Sulfatide with short fatty acid dominates in astrocytes and neurons. *FEBS J.* **273(8)**, 1782-1790 (2006).
3. Moyano, A.L., Li, G., Lopez-Rosas, A., *et al.* Distribution of C16:0, C18:0, C24:1, and C24:0 sulfatides in central nervous system lipid rafts by quantitative ultra-high-pressure liquid chromatography tandem mass spectrometry. *Anal. Biochem.* **467**, 31-39 (2014).
4. Moyano, A.L., Pituch, K., Li, G., *et al.* Levels of plasma sulfatides C18 : 0 and C24 : 1 correlate with disease status in relapsing-remitting multiple sclerosis. *J. Neurochem.* **127(5)**, 600-604 (2013).
5. Saville, J.T., Smith, N.J.C., Fletcher, J.M., *et al.* Quantification of plasma sulfatides by mass spectrometry: Utility for metachromatic leukodystrophy. *Anal. Chim. Acta* **955**, 79-85 (2017).
6. Isaac, G., Pernber, Z., Gieselmann, V., *et al.* Sulfatide with short fatty acid dominates in astrocytes and neurons. *FEBS J.* **273(8)**, 1782-1790 (2006).
7. Svennerholm, L. and Ställberg-Stenhagen, S. Changes in the fatty acid composition of cerebrosides and sulfatides of human nervous tissue with age. *J. Lipid Res.* **9(2)**, 215-225 (1968).

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