

PRODUCT INFORMATION



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

Item No. 24624

Formal Name: (2R,3R,4S,5S,6R)-3,5-dihydroxy-2-(((2S,3R,E)-3-hydroxy-2-(octadecanamido-18,18,18-d₃)octadec-4-en-1-yl)oxy)-6-(hydroxymethyl)tetrahydro-2H-pyran-4-yl hydrogen sulfate

Synonyms: N-Octadecanoyl Sulfatide-d₃, N-ω-CD₃-Octadecanoyl-sulfatide

MF: C₄₂H₇₈D₃NO₁₁S

FW: 811.2

Chemical Purity: ≥98% (C18 3'-sulfo Galactosylceramide)

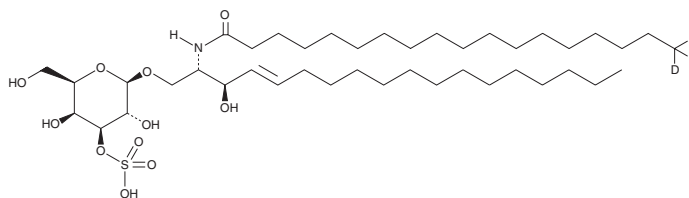
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

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-d₃ (d18:1/18:0-d₃) is intended for use as an internal standard for the quantification of C18 3'-sulfo galactosylceramide (Item No. 24863) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

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.^{2,6} As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Takahashi, T. and Suzuki, T. *J. Lipid Res.* **53(8)**, 1437-1450 (2012).
2. Isaac, G., Pernber, Z., Gieselmann, V., et al. *FEBS J.* **273(8)**, 1782-1790 (2006).
3. Moyano, A.L., Li, G., Lopez-Rosas, A., et al. *Anal. Biochem.* **467**, 31-39 (2014).
4. Moyano, A.L., Pituch, K., Li, G., et al. *J. Neurochem.* **127(5)**, 600-604 (2013).
5. Saville, J.T., Smith, N.J.C., Fletcher, J.M., et al. *Anal. Chim. Acta* **955**, 79-85 (2017).
6. Svennerholm, L. and Ställberg-Stenhagen, S. *J. Lipid Res.* **9(2)**, 215-225 (1968).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM