

PRODUCT INFORMATION



3'-sulfo Galactosylsphingosine (ammonium salt)

Item No. 25316

CAS Registry No.: 1246681-32-2
Formal Name: (2S,3R,4E)-2-amino-3-hydroxy-4-octadecen-1-yl, β -D-galactopyranoside, 3-(hydrogen sulfate), monoammonium salt

Synonyms: Lyso 3'-sulfo Galactosylceramide, Lyso-Sulfatide, Sphingosine-1-Galactoside-3-Sulfate, Sulfogalactosylsphingosine

MF: $C_{24}H_{46}NO_{10}S \cdot NH_4$

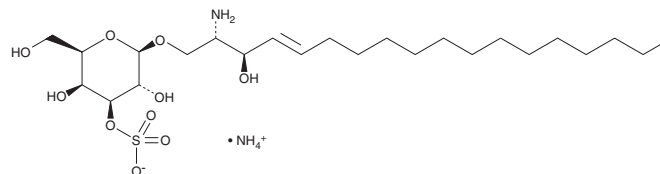
FW: 558.7

Purity: $\geq 98\%$

Supplied as: A solid

Storage: $-20^{\circ}C$

Stability: ≥ 4 years



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

Laboratory Procedures

3'-sulfo Galactosylsphingosine (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the 3'-sulfo galactosylsphingosine (ammonium salt) in the solvent of choice. 3'-sulfo Galactosylsphingosine (ammonium salt) is soluble in a 2:1 solution of chloroform:methanol.

Description

3'-sulfo Galactosylsphingosine is a form of sulfatide (Item No. 24323) that is lacking the fatty acyl group. It decreases migration and adhesion of B35 neuroblastoma cells and increases cell rounding when used at a concentration of $20 \mu M$.¹ It also inhibits PKC and cytochrome c oxidase activity when used at concentrations of 150 and $50-100 \mu M$, respectively.² 3'-sulfo Galactosylsphingosine accumulates in patients with metachromatic leukodystrophy, a lysosomal storage disorder characterized by arylsulfatase A (ASA) deficiency leading to progressive demyelination and neuromotor deficits.³ In mice lacking ASA, levels of 3'-sulfo galactosylsphingosine increase after one month of age followed by demyelination and neuromotor deficits.^{2,3} 3'-sulfo Galactosylsphingosine has been used as a standard for the quantification of 3'-sulfo galactosylsphingosine by LC-MS.⁴

References

1. Hans, M., Pusch, A., Dai, L., *et al.* Lysosulfatide regulates the motility of a neural precursor cell line via calcium-mediated process collapse. *Neurochem. Res.* **34(3)**, 508-517 (2009).
2. Blomqvist, M., Gieselmann, V., and Månsson, J.E. Accumulation of lysosulfatide in the brain of arylsulfatase A-deficient mice. *Lipids Health Dis.* **10:28**, (2011).
3. Toda, K., Kobayashi, T., Goto, I., *et al.* Lysosulfatide (sulfogalactosylsphingosine) accumulation in tissues from patients with metachromatic leukodystrophy. *J. Neurochem.* **55(5)**, 1585-1591 (1990).
4. Mirzaian, M., Kramer, G., and Poorthuis, B.J. Quantification of sulfatides and lysosulfatides in tissues and body fluids by liquid chromatography-tandem mass spectrometry. *J. Lipid. Res.* **56(4)**, 936-943 (2015).

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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