

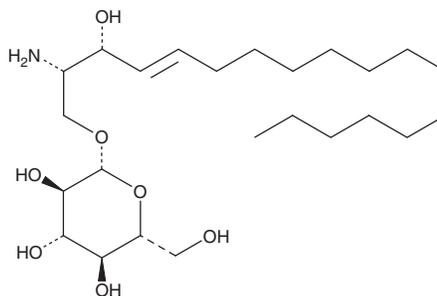
PRODUCT INFORMATION



1-β-D-Glucosylsphingosine

Item No. 31556

CAS Registry No.: 52050-17-6
Formal Name: (2S,3R,4E)-2-amino-3-hydroxy-4-octadecen-1-yl, β-D-glucopyranoside
Synonyms: Glucosyl-C₁₈-sphingosine, Glucosylsphingosine (d18:1)
MF: C₂₄H₄₇NO₇
FW: 461.6
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

1-β-D-Glucosylsphingosine is supplied as a solid. A stock solution may be made by dissolving the 1-β-D-glucosylsphingosine in the solvent of choice, which should be purged with an inert gas. 1-β-D-Glucosylsphingosine is soluble in ethanol, methanol, and a 2:1 solution of chloroform:methanol.

Description

1-β-D-Glucosylsphingosine is a glucosylsphingosine, which are deacetylated lysolipid derivatives of glucocerebrosides (Item Nos. 23206 | 23207 | 25850).¹ They are formed when sphingosines undergo glucosidation by UDP-glucose.² Glucosylsphingosines completely reduce neurite outgrowth and induce death of LA-N-2 cells when used at concentrations of 10 and 50 μM, respectively. They also decrease the activity of glucocerebrosidase in LA-N-2 cells in a concentration-dependent manner. Glucosylsphingosine levels are elevated in patients with Gaucher's disease, both in the spleen (in types 1, 2, and 3) and brain (types 2 and 3), thus, glucosylsphingosine has been used as a key biomarker of the disease.^{1,3} This product contains 1-β-D-glucosylsphingosine (d18:1) isolated from bovine buttermilk. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Murugesan, V., Chuang, W.-L., Liu, J., et al. Glucosylsphingosine is a key biomarker of Gaucher disease. *Am. J. Hematol.* **91(11)**, 1082-1089 (2016).
2. Schueler, U.H., Kolter, T., Kaneski, C.R., et al. Toxicity of glucosylsphingosine (glucopsychosine) to cultured neuronal cells: A model system for assessing neuronal damage in Gaucher disease type 2 and 3. *Neurobiol. Dis.* **14(3)**, 595-601 (2003).
3. Orvisky, E., Park, J.K., LaMarca, M.E., et al. Glucosylsphingosine accumulation in tissues from patients with Gaucher disease: Correlation with phenotype and genotype. *Mol. Genet. Metab.* **76(4)**, 262-270 (2002).

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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