

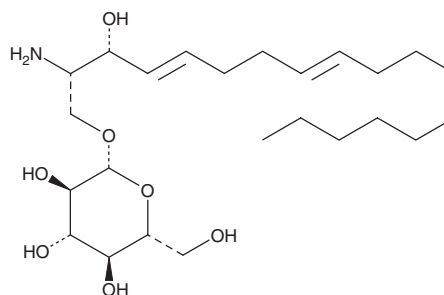
# PRODUCT INFORMATION



## 1-β-D-Glucosylsphingadienine

Item No. 23213

**CAS Registry No.:** 114200-59-8  
**Formal Name:** 2S-amino-3R-hydroxy-4E,8E-octadecadienyl, β-D-glucopyranoside  
**Synonyms:** Glucosylsphingadienine (d18:2 (4E,8E)), 1-β-D-Glucosylsphingadienine (plant), Glucosylsphingosine (plant)  
**MF:** C<sub>24</sub>H<sub>45</sub>NO<sub>7</sub>  
**FW:** 459.6  
**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-Glucosylsphingadienine is supplied as a solid. A stock solution may be made by dissolving the 1-β-D-glucosylsphingadienine in the solvent of choice, which should be purged with an inert gas. 1-β-D-Glucosylsphingadienine is soluble in a 4:1 solution of chloroform:methanol.

### Description

1-β-D-Glucosylsphingadienine is a glucosylsphingosine, which are deacetylated lysolipid derivatives of glucosylcerebrosides (Item Nos. 23206 | 23207).<sup>1</sup> They are formed when sphingosines undergo glucosidation by UDP-glucose.<sup>2</sup> Glucosylsphingosines completely reduce neurite outgrowth and induce death of LA-N-2 cells at concentrations of 10 and 50 μM, respectively. They also decrease the activity of glucocerebrosidase in LA-N-2 cells in a dose-dependent manner. Glucosylsphingosine levels are elevated in patients with Gaucher's disease, both in the spleen (in types 1, 2, and 3) and brain (type 2 and 3); thus, glucosylsphingosine has been used as a key biomarker of the disease.<sup>1,3</sup> 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., Kaneshi, 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

#### 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