

# PRODUCT INFORMATION



## C16 Globotriaosylceramide (d18:1/16:0)

Item No. 24875

CAS Registry No.: 137896-85-6

Formal Name: N-[(1S,2R,3E)-1-[[[O- $\alpha$ -D-galactopyranosyl-(1 $\rightarrow$ 4)-O- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl]oxy]methyl]-2-hydroxy-3-heptadecen-1-yl]-hexadecanamide

Synonyms: C16 Ceramide Trihexoside (d18:1/16:0), Gb<sub>3</sub> (d18:1/16:0), N-Hexadecanoyl-ceramide trihexoside

MF: C<sub>52</sub>H<sub>97</sub>NO<sub>18</sub>

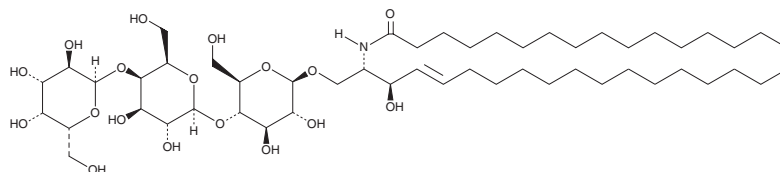
FW: 1,024.3

Purity:  $\geq$ 98%

Supplied as: A solid

Storage: -20°C

Stability:  $\geq$ 4 years



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

### Laboratory Procedures

C16 globotriaosylceramide (d18:1/16:0) is supplied as a solid. A stock solution may be made by dissolving the C16 globotriaosylceramide (d18:1/16:0) in the solvent of choice. C16 globotriaosylceramide (d18:1/16:0) is soluble in the organic solvents DMSO, hot methanol, and in a 2:1 solution of chloroform:methanol (hot).

### Description

C16 globotriaosylceramide is an endogenous sphingolipid found in mammalian cell membranes that is synthesized from C16 lactosylceramide (Item No. 24352).<sup>1</sup> C16 globotriaosylceramide acts as a receptor for Shiga toxin in B cell-derived Raji cells and THP-1 monocytes.<sup>2</sup> It accumulates in endothelial cells, pericytes, vascular smooth muscle cells, renal epithelial cells, dorsal ganglia neuronal cells, and myocardial cells in patients with Fabry disease.<sup>3</sup> C16 globotriaosylceramide is also upregulated in plasma of patients with ovarian carcinoma compared to those with benign ovarian tumors or uterine fibroids.<sup>4</sup> As this product is derived from a natural source, there may be variations in the sphingoid backbone.

### References

1. Lingwood, C.A. and Branch, D.R. The role of glycosphingolipids in HIV/AIDS. *Discov. Med.* **11**(59), 303-313 (2011).
2. Hoffmann, P., Hülsewig, M., Duvar, S., et al. On the structural diversity of Shiga toxin glycosphingolipid receptors in lymphoid and myeloid cells determined by nano-electrospray ionization tandem mass spectrometry. *Rapid Commun. Mass. Spectrom.* **24**(15), 2295-2304 (2010).
3. Feldt-Rasmussen, U., Rasmussen, A.K., Mersebach, H., et al. Fabry disease: A new challenge in endocrinology and metabolism? *Eur. J. Endocrinol.* **146**(6), 741-742 (2002).
4. Hou, Y., Li, J., Xie, H., et al. Differential plasma lipids profiling and lipid signatures as biomarkers in the early diagnosis of ovarian carcinoma using UPLC-MS. *Metabolomics* **12**(18), (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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