

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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## Lieferung & Zahlungsart

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- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION



## C16 $\alpha$ -Glucosylceramide (d18:1/16:0) (synthetic)

Item No. 40274

CAS Registry No.: 74365-77-8

Formal Name: N-[(1S,2R,3E)-1-[(β-D-

glucopyranosyloxy)methyl]-2-hydroxy-3-

heptadecen-1-yl]-hexadecanamide

 $N-\omega-CD_3$ -Hexadecanoyl-Synonyms:

glucopsychosine, GluCer(d18:1/16:0)

MF:  $C_{40}H_{77}NO_{8}$ FW: 700.0 **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**

C16 α-Glucosylceramide (d18:1/16:0) (synthetic) is supplied as a solid. A stock solution may be made by dissolving the C16 a-glucosylceramide (d18:1/16:0) (synthetic) in the solvent of choice, which should be purged with an inert gas. C16  $\alpha$ -Glucosylceramide (d18:1/16:0) (synthetic) is sparingly soluble (1-10 mg/ml) in the organic solvent methanol.

#### Description

C16  $\alpha$ -Glucosylceramide is a bioactive glycosphingolipid.<sup>1,2</sup> It is a precursor in the synthesis of C16 lactosylceramide (Item No. 24352) that is formed via metabolism of C16 ceramide (Item No. 10681) by glucosylceramide synthase.<sup>3</sup> Inhalation of C16 glucosylceramide reduces lung colonization by P. aeruginosa and increases survival in a mouse model of cystic fibrosis. C16 Glucosylceramide levels are elevated in the plasma of Parkinson's disease patients with cognitive impairments. This product is fully synthetic and has no variations in the fatty acyl chain or sphingoid backbone.

#### References

- 1. Kovacic, B., Sehl, C., Wilker, B., et al. Glucosylceramide critically contributes to the host defense of cystic fibrosis lungs. Cell Physiol. Biochem. 41(3), 1208-1218 (2017).
- 2. Mielke, M.M., Maetzler, W., Haughey, N.J., et al. Plasma ceramide and glucosylceramide metabolism is altered in sporadic Parkinson's disease and associated with cognitive impairment: A pilot study. PLoS One 8(9), e73094 (2013).
- 3. Holland, W.L. and Summers, S.A. Sphingolipids, insulin resistance, and metabolic disease: New insights from in vivo manipulation of sphingolipid metabolism. Endocr. Rev. 29(4), 381-402 (2008).

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

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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