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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

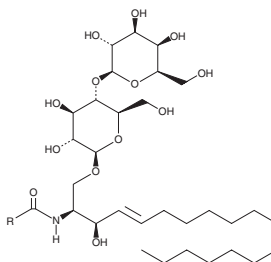
PRODUCT INFORMATION



Lactosylceramides (bovine brain)

Item No. 16983

Synonym:	LacCers(d18:1/acyl mixture)
MF:	C ₄₈ H ₉₁ NO ₁₃ (for stearyl)
FW:	890.2
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Lactosylceramides (bovine brain) (LacCers(bovine brain)) is supplied as a solid. A stock solution may be made by dissolving the LacCers(bovine brain) in the solvent of choice. LacCers(bovine brain) is soluble in the organic solvent DMSO, which should be purged with an inert gas.

Description

LacCer is an endogenous bioactive sphingolipid. It is expressed on the plasma membrane of human phagocytes and mediates phagocytosis, chemotaxis, and superoxide generation.¹ LacCer forms membrane microdomains with Lyn kinase and the α_i subunits of inhibitory G protein-coupled receptors, suggesting a role in cell signaling. Elevated LacCer levels in kidney cortex homogenates and urine are directly correlated with hyperglycemia, insulin resistance, and obesity in *db/db* transgenic diabetic mice.² It promotes recruitment of CNS-infiltrating monocytes and microglia and enhances neurodegeneration in mice with chronic experimental autoimmune encephalomyelitis (EAE), a model of multiple sclerosis (MS).³ Increased levels of LacCer in atherosclerotic plaques are correlated with increased levels of the pro-inflammatory cytokines IL-6, monocyte chemoattractant protein-1 (MCP-1), and macrophage inflammatory protein 1 β (MIP-1 β), as well as lipids and macrophages.⁴ LacCer is also upregulated during the secretory phase of the menstrual cycle.⁵ This product is a mixture of LacCers isolated from bovine brain with variable N-acyl chain lengths.

References

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2. Subathra, M., Korrapati, M., Howell, L.A., *et al.* Kidney glycosphingolipids are elevated early in diabetic nephropathy and mediate hypertrophy of mesangial cells. *Am. J. Physiol. Renal Physiol.* **309(3)** (2015).
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4. Edsfeldt, A., Dunér, P., Ståhlman, M., *et al.* Sphingolipids contribute to human atherosclerotic plaque inflammation. *Arterioscler. Thromb. Vasc. Biol.* **36(6)** (2016).
5. Mikami, M., Tukazaki, K., Nozawa, S., *et al.* Menstrual cycle-associated expression of 2-hydroxy fatty acyl phytosphingosine-containing GlcCer, LacCer and Gb3Cer in human uterine endometrium. *Biochim Biophys. Acta.* **1125(1)**, 104-109 (1992).

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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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