

PRODUCT INFORMATION

Lactosylceramide and Ganglioside G_{M3} and G_{D3} Mixture

Item No. 29361

Supplied as: A 500 µg/ml solution in chloroform:methanol:water (2:1:0.1)

Storage: -20°C

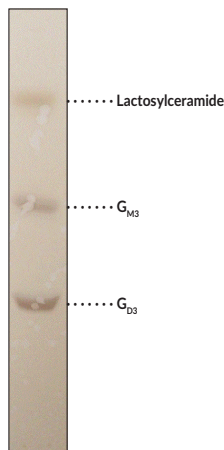
Stability: ≥4 years

Concentration: 0.5 mg/ml

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

Description and Data

Lactosylceramides (LacCers) are endogenous bioactive membrane sphingolipids. They have a role in phagocytosis, chemotaxis, and cell signaling.¹ LacCer levels are correlated with insulin resistance, obesity, and hyperglycemia in diabetic mice and LacCers enhance neurodegeneration in a mouse model of multiple sclerosis.^{2,3} Sialogangliosides are membrane sphingolipids composed of sialic acid and oligosaccharide moieties with roles in cell proliferation, differentiation, adhesion, neuronal plasticity, intra- and intercellular signaling, and neurogenesis.⁴⁻⁶ They accumulate in a variety of lysosomal storage disorders including Sandhoff, Tay-Sachs, and Niemann-Pick diseases.^{7,8} Lactosylceramide and Ganglioside G_{M3} and G_{D3} Mixture contains lactosylceramide (LacCer), ganglioside G_{M3}, and ganglioside G_{D3}. It is intended for use as a reference standard for the detection of LacCer, ganglioside G_{M3}, and ganglioside G_{D3} in various sample types by TLC or LC-MS. This mixture is supplied in an amber ampule in which the headspace has been purged with argon to prevent lipid oxidation.



References

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3. Mayo, L., Trauger, S.A., Blain, M., *et al.* *Nat. Med.* **20(10)**, 1147-1156 (2014).
4. Kolter, T. *ISRN Biochem.* **2012:506160**, (2012).
5. Mukherjee, P., Faber, A.C., Shelton, L.M., *et al.* *J. Lipid Res.* **49(5)**, 929-938 (2008).
6. Wang, J., Cheng, A., Wakade, C., *et al.* *J. Neurosci.* **34(41)**, 13790-13800 (2014).
7. Baek, R.C., Martin, D.R., Cox, N.R., *et al.* *Lipids* **44(3)**, 197-205 (2009).
8. Walkley, S.U. *Semin. Cell Dev. Biol.* **15(4)**, 433-444 (2004).

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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