

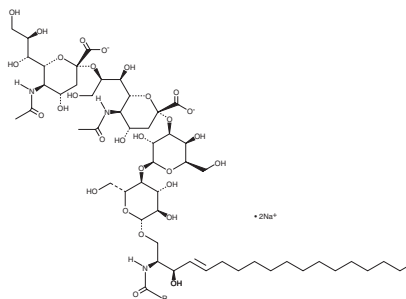
PRODUCT INFORMATION



Ganglioside G_{D3} (bovine brain) (sodium salt)

Item No. 17481

CAS Registry No.: 62010-37-1
Synonym: Disialosyllactosylceramide
MF: C₇₀H₁₂₃N₃O₂₉ • 2Na
(for tricosanoyl)
FW: 1,516.7
Purity: ≥98%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Ganglioside G_{D3} (bovine brain) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the ganglioside G_{D3} (bovine brain) (sodium salt) in the solvent of choice. Ganglioside G_{D3} (bovine brain) (sodium salt) is soluble in water or in a 1:1 solution of chloroform:methanol. We do not recommend storing the aqueous solution for more than one day.

Description

Ganglioside G_{D3} is synthesized by the addition of two sialic acid residues to lactosylceramide and can serve as a precursor to the formation of more complex gangliosides by the action of glycosyl- and sialyltransferases.¹ It induces apoptosis in HuT-78 cutaneous T cell lymphoma cells in a concentration-dependent manner and disrupts the mitochondrial membrane potential when used at a concentration of 200 μM.² Expression of ganglioside G_{D3} in G_{D3}-negative SK-MEL-28-N1 malignant melanoma cells increases both cell proliferation and invasion *in vitro*.³ Ganglioside G_{D3}-deficient adult mice exhibit progressive loss of the neural stem cell (NSC) pool and impaired neurogenesis.⁴ This product contains ganglioside G_{D3} molecular species with primarily C18:0 fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Kolter, T. Ganglioside biochemistry. *ISRN Biochem.* 506160 (2012).
2. De Maria, R., Lenti, L., Malisan, F., *et al.* Requirement for G_{D3} ganglioside in CD95- and ceramide-induced apoptosis. *Science* **277**(5332), 1652-1655 (1997).
3. Hamamura, K., Furukawa, K., Hayashi, T., *et al.* Ganglioside G_{D3} promotes cell growth and invasion through p130Cas and paxillin in malignant melanoma cells. *Proc. Natl. Acad. Sci. USA* **102**(31), 11041-11046 (2005).
4. Wang, J., Cheng, A., Wakade, C., *et al.* Ganglioside GD3 is required for neurogenesis and long-term maintenance of neural stem cells in the postnatal mouse brain. *J. Neurosci.* **34**(41), 13790-13800 (2014).

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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