



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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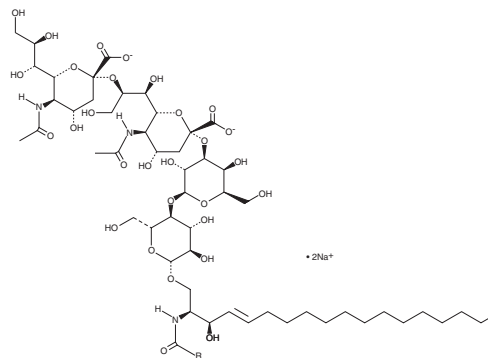
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# PRODUCT INFORMATION



## Ganglioside G<sub>D3</sub> Mixture (sodium salt) Item No. 17481

**CAS Registry No.:** 62010-37-1  
**Synonym:** Disialosyllactosylceramide Mixture  
**MF:** C<sub>70</sub>H<sub>123</sub>N<sub>3</sub>O<sub>29</sub> • 2Na  
(for tricosanoyl)  
**FW:** 1,516.7  
**Purity:** ≥98%  
**Supplied as:** A lyophilized powder  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Ganglioside G<sub>D3</sub> mixture (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the ganglioside G<sub>D3</sub> mixture (sodium salt) in the solvent of choice. Ganglioside G<sub>D3</sub> mixture (sodium salt) is soluble in water or in a 1:1 solution of chloroform:methanol.

### Description

Ganglioside G<sub>D3</sub> 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.<sup>1</sup> 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.<sup>2</sup> Expression of ganglioside G<sub>D3</sub> in G<sub>D3</sub>-negative SK-MEL-28-N1 malignant melanoma cells increases both cell proliferation and invasion *in vitro*.<sup>3</sup> Ganglioside G<sub>D3</sub>-deficient adult mice exhibit progressive loss of the neural stem cell (NSC) pool and impaired neurogenesis.<sup>4</sup> Ganglioside G<sub>D3</sub> mixture contains ganglioside G<sub>D3</sub> molecular species with C18:1 and C20:1 sphingoid backbones.

### References

1. Kolter, T. Ganglioside biochemistry. *ISRN Biochem.* **2012:506160**, (2012).
2. De Maria, R., Lenti, L., Malisan, F., *et al.* Requirement for G<sub>D3</sub> ganglioside in CD95- and ceramide-induced apoptosis. *Science* **277(5332)**, 1652-1655 (1997).
3. Hamamura, K., Furukawa, K., Hayashi, T., *et al.* Ganglioside G<sub>D3</sub> 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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