



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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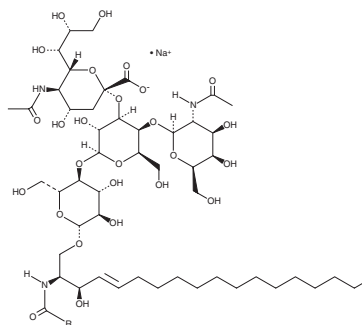
# PRODUCT INFORMATION



## Ganglioside G<sub>M2</sub> Mixture (sodium salt)

Item No. 27192

**CAS Registry No.:** 19600-01-2  
**Synonyms:** G<sub>M2</sub> Mixture,  
Monosialoganglioside G<sub>M2</sub> Mixture  
**MF:** C<sub>67</sub>H<sub>120</sub>N<sub>3</sub>O<sub>26</sub> • Na (for stearoyl)  
**FW:** 1,406.7  
**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

Ganglioside G<sub>M2</sub> mixture (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G<sub>M2</sub> mixture (sodium salt) in the solvent of choice. Ganglioside G<sub>M2</sub> mixture (sodium salt) is soluble in a 2:1 solution of chloroform:methanol. Ganglioside G<sub>M2</sub> mixture (sodium salt) is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Ganglioside G<sub>M2</sub> is a glycosphingolipid component of cellular membranes, primarily the plasma membrane.<sup>1</sup> Gangliosides isolated from apoptogenic glioblastoma multiforme (GBM) cells are enriched in ganglioside G<sub>M2</sub> compared with nonapoptogenic GBM cells, and ganglioside G<sub>M2</sub> induces activated T cell death when used at a concentration of 150 µg/ml *in vitro*.<sup>2</sup> Serum ganglioside G<sub>M2</sub> levels are increased in patients with breast cancer or cholangiocarcinoma.<sup>3,4</sup> Levels of ganglioside G<sub>M2</sub> are elevated in the brain of patients with Sandhoff disease, as well as feline and mouse models of the disease.<sup>5</sup> Ganglioside G<sub>M2</sub> accumulates in the lysosomes of individuals with Tay-Sachs disease and G<sub>M2</sub>-activator deficiency, as well as in the CNS of patients with and animal models of mucopolysaccharide storage disorders and Niemann-Pick disease types A, C1, and C2.<sup>5,6</sup> Ganglioside G<sub>M2</sub> mixture contains ganglioside G<sub>M2</sub> molecular species with C18:1 and C20:1 sphingoid backbones.

### References

1. Bisel, B., Pavone, F.S., and Calamai, M. GM1 and GM2 gangliosides: Recent developments. *Biomol Concepts* **5**(1), 87-93 (2014).
2. Chahlavi, A., Rayman, P., Richmond, A.L., *et al.* Glioblastomas induce T-lymphocyte death by two distinct pathways involving gangliosides and CD70. *Cancer Res.* **65**(12), 5428-5438 (2005).
3. Li, Q., Sun, M., Yu, M., *et al.* Gangliosides profiling in serum of breast cancer patient: GM3 as a potential diagnostic biomarker. *Glycoconj. J.* **36**(5), 419-428 (2019).
4. Talabnin, K., Talabnin, C., Kumagai, T., *et al.* Ganglioside GM2: A potential biomarker for cholangiocarcinoma. *J. Int. Med. Res.* **48**(7), 1-10 (2020).
5. Baek, R.C., Martin, D.R., Cox, N.R., *et al.* Comparative analysis of brain lipids in mice, cats, and humans with Sandhoff disease. *Lipids* **44**(3), 197-205 (2009).
6. Walkley, S.U. Secondary accumulation of gangliosides in lysosomal storage disorders. *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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