

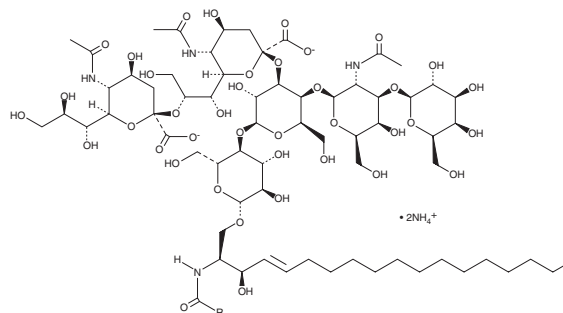
# PRODUCT INFORMATION



## Ganglioside G<sub>D1b</sub> (bovine) (ammonium salt)

Item No. 31708

**CAS Registry No.:** 19553-76-5  
**Formal Name:** ganglioside G<sub>D1b</sub>, diammonium salt  
**Synonyms:** Disialoganglioside G<sub>D1b</sub>, Ganglioside C<sub>1</sub>, Ganglioside G<sub>2</sub>  
**MF:** C<sub>84</sub>H<sub>146</sub>N<sub>4</sub>O<sub>39</sub> • 2NH<sub>4</sub> (for stearoyl)  
**FW:** 1,872.2  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



**Special Conditions:** Forms micellar solution in water

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

### Laboratory Procedures

Ganglioside G<sub>D1b</sub> (bovine) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G<sub>D1b</sub> (bovine) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G<sub>D1b</sub> (bovine) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:water. We do not recommend storing the aqueous solution for more than one day.

### Description

Ganglioside G<sub>D1b</sub> is an acidic glycosphingolipid that contains two sialic acid residues linked to an inner galactose unit. It is a component of plasma membranes where it packs densely with cholesterol to form lipid microdomains that modulate both intra- and intercellular signaling events.<sup>1</sup> The concentration of ganglioside G<sub>D1b</sub> in human brain increases with age, constituting 7.85% of total sialic acid in the brain of 0- to 10-year-old subjects and 20.29% in 11- to 30-year-old subjects.<sup>2</sup> Ganglioside G<sub>D1b</sub> levels are positively correlated with pilocytic astrocytoma tumor grade, and G<sub>D1b</sub> has been detected in various other gliomas, including primitive neuroectodermal tumors, glioblastomas, and anaplastic astrocytomas.<sup>3</sup> This product contains ganglioside G<sub>D1b</sub> 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. Riboni, L., Sonnino, S., Acquotti, D., et al. Natural occurrence of ganglioside lactones. Isolation and characterization of G<sub>D1b</sub> inner ester from adult human brain. *J. Biol. Chem.* **261**(18), 8514-8519 (1986).
3. Comas, T.C., Tai, T., Kimmel, D., et al. Immunohistochemical staining for ganglioside GD1b as a diagnostic and prognostic marker for primary human brain tumors. *Neuro Oncol.* **1**(4), 261-267 (1999).

#### 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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