

# PRODUCT INFORMATION

## Ganglioside G<sub>D1b</sub> (porcine brain) (ammonium salt) Item No. 31593

CAS Registry No.: 19553-76-5

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%

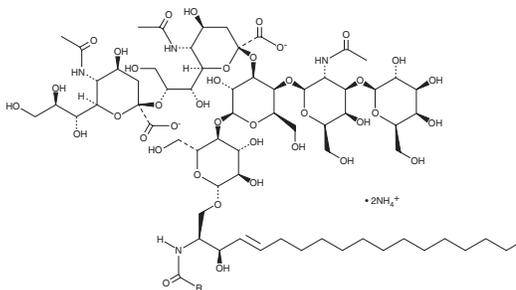
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Special Conditions: Forms a 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> (porcine brain) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G<sub>D1b</sub> (porcine brain) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G<sub>D1b</sub> (porcine brain) (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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM