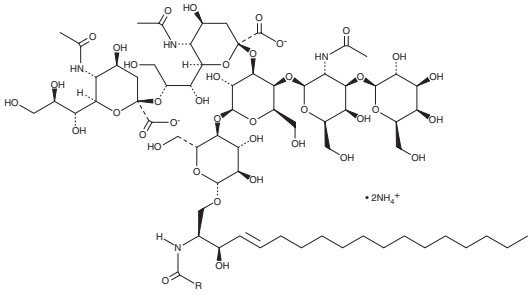
PRODUCT INFORMATION

Ganglioside G_{D1b} (porcine brain) (ammonium salt)

Item No. 31593

CAS Registry No.: 19553-76-5
Synonyms: Disialoganglioside G_{D1b}, Ganglioside C_1, Ganglioside G_2
MF: $C_{84}H_{146}N_4O_{39} \bullet 2NH_4$ (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_{D1b} (porcine brain) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G_{D1b} (porcine brain) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G_{D1b} (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_{D1b} 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.[1] The concentration of ganglioside G_{D1b} 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.[2] Ganglioside G_{D1b} levels are positively correlated with pilocytic astrocytoma tumor grade, and G_{D1b} has been detected in various other gliomas, including primitive neuroectodermal tumors, glioblastomas, and anaplastic astrocytomas.[3] This product contains ganglioside G_{D1b} 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_{D1b} 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).

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