PRODUCT INFORMATION



Ganglioside G_{D1b} Mixture (porcine brain) (ammonium salt) Item No. 31593

CAS Registry No.: Synonyms:	19553-76-5 Disialoganglioside G_{D1b} Mixture, Ganglioside C_1 Mixture, Ganglioside G_2 Mixture
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} mixture (porcine brain) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G_{D1b} mixture (porcine brain) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G_{D1b} mixture (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_{D1h} 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 Ganglioside G_{D1b} mixture contains ganglioside G_{D1b} molecular species isolated from porcine brain with primarily C18:0 fatty acyl chain lengths, as well as a lower amount of C20:0 fatty acyl chain lengths, among various others.

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).

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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