

PRODUCT INFORMATION



Ganglioside G_{T1b} (porcine) (ammonium salt)

Item No. 31592

CAS Registry No.: 59247-13-1

Formal Name: ganglioside G_{T1b}, triammonium salt

Synonyms: Ganglioside G₁,
Trisialoganglioside G_{T1b}

MF: C₉₅H₁₆₂N₅O₄₇ • 3NH₄ (for
stearoyl)

FW: 2,180.5

Purity: ≥98%

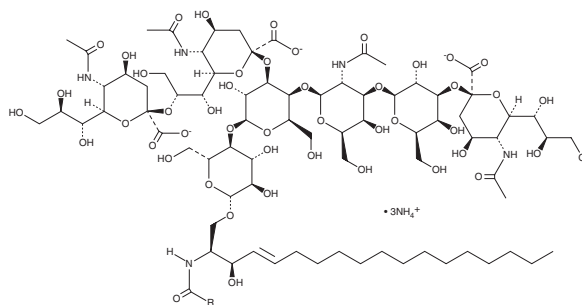
Supplied as: A solid

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_{T1b} (porcine) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G_{T1b} (porcine) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G_{T1b} (porcine) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:DI water. We do not recommend storing the aqueous solution for more than one day.

Description

Ganglioside G_{T1b} is a trisialoganglioside that is characterized by having two sialic residues linked to the inner galactose unit. It binds to the neurotoxins botulinum toxin serotype A (BTxA), BTxA heavy chain, and tetanus toxin with IC₅₀ values of 11, 0.74, and 7.2 μM, respectively.¹ Ganglioside G_{T1b}-containing liposomes bind to the major coat protein VP1 from Merkel cell polyomavirus (MCPyV), which has been identified in Merkel cell carcinomas, identifying ganglioside G_{T1b} as a putative MCPyV receptor.² Ganglioside G_{T1b} decreases spontaneous production of IL-6, IL-10, IgG, IgM, and IgA in human peripheral blood mononuclear cells (PBMCs) by 31.4, 30.5, 60, 59.5, and 58%, respectively, when used at a concentration of 10 μM.³ This product contains ganglioside G_{T1b} 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. Schengrund, C.-L., DasGupta, B.R., and Ringler, N.J. Binding of botulinum and tetanus neurotoxins to ganglioside GT1b and derivatives thereof. *J. Neurochem.* **57**(3), 1024-1032 (1991).
2. Erickson, K.D., Garcea, R.L., and Tsai, B. Ganglioside GT1b is a putative host cell receptor for the Merkel cell polyomavirus. *J. Virol.* **83**(19), 10275-10279 (2009).
3. Kanda, N. and Tamaki, K. Ganglioside GT1b suppresses immunoglobulin production by human peripheral blood mononuclear cells. *Immunology* **96**(4), 628-633 (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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