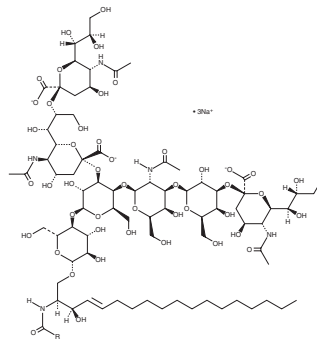


# PRODUCT INFORMATION



## Ganglioside G<sub>T1b</sub> (bovine) (sodium salt) Item No. 15588

**Synonyms:** Ganglioside G<sub>1</sub>, Trisialoganglioside G<sub>T1b</sub>  
**MF:** C<sub>95</sub>H<sub>162</sub>N<sub>5</sub>O<sub>47</sub> • 3Na (for stearoyl)  
**FW:** 2,195.3  
**Purity:** ≥98%  
**Supplied as:** A lyophilized solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Special Conditions:** Hygroscopic. Protect from moisture.



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

### Laboratory Procedures

Ganglioside G<sub>T1b</sub> (bovine) (sodium salt) is supplied as a lyophilized solid. A stock solution may be made by dissolving the ganglioside G<sub>T1b</sub> (bovine) (sodium salt) in the solvent of choice. Ganglioside G<sub>T1b</sub> (bovine) (sodium salt) is soluble in water (micellar aggregates) or 2:1 chloroform:methanol.

### Description

Ganglioside G<sub>T1b</sub> 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 IC<sub>50</sub> values of 11, 0.74, and 7.2 μM, respectively.<sup>1</sup> Ganglioside G<sub>T1b</sub>-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<sub>T1b</sub> as a putative MCPyV receptor.<sup>2</sup> Ganglioside G<sub>T1b</sub> decreases 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.<sup>3</sup> This product contains ganglioside G<sub>T1b</sub> molecular species with variable fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

### References

- 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).
- 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).
- 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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