

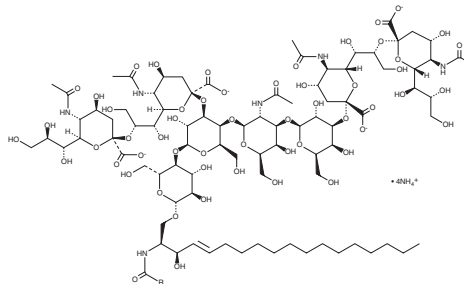
PRODUCT INFORMATION



Ganglioside G_{Q1b} (porcine) (ammonium salt)

Item No. 31562

CAS Registry No.: 68652-37-9
MF: C₁₀₆H₁₇₈N₆O₅₅ • 4NH₄ (for stearoyl)
FW: 2,488.7
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_{Q1b} (porcine) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G_{Q1b} (porcine) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G_{Q1b} (porcine) (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_{Q1b} is a tetrasialoganglioside that contains two sialic acid residues linked to an inner galactose unit. It stimulates phosphorylation of several ecto-type protein kinase substrates on the surface of GOTO human neuroblastoma cells when used at a concentration of 5 nM.¹ Ganglioside G_{Q1b} promotes differentiation of murine embryonic stem cells (mESCs) to neuronal precursor and glial cells *via* activation of the ERK1/2 pathway.² It also induces differentiation of murine keratinocytes through phosphoinositide turnover.³ This product contains ganglioside G_{Q1b} 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. Tsuji, S., Yamashita, T., and Nagai, Y. A novel, carbohydrate signal-mediated cell surface protein phosphorylation: Ganglioside GQ1b stimulates ecto-protein kinase activity on the cell surface of a human neuroblastoma cell line, GOTO. *J. Bio. Chem.* **104(4)**, 498-503 (1988).
2. Kwak, D.H., Jin, J.W., Ryu, J.S., *et al.* Regulatory roles of ganglioside GQ1b in neuronal cell differentiation of mouse embryonic stem cells. *BMB Rep.* **44(12)**, 799-804 (2011).
3. Yada, Y., Okano, Y., and Nozawa, Y. Ganglioside G_{Q1b}-induced terminal differentiation in cultured mouse keratinocytes. Phosphoinositide turnover forms the onset signal. *Biochem. J.* **279(Pt 3)**, 665-670 (1991).

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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