

PRODUCT INFORMATION



Fucosylated Ganglioside G_{M1} (porcine) (ammonium salt)

Item No. 24838

Formal Name: 1-O-[O-(N-acetyl- α -neuraminosyl)-(2 \rightarrow 3)-O-[O-6-deoxy- α -L-galactopyranosyl-(1 \rightarrow 2)-O- β -D-galactopyranosyl-(1 \rightarrow 3)-2-(acetilamino)-2-deoxy- β -D-galactopyranosyl-(1 \rightarrow 4)]-O- β -D-galactopyranosyl-(1 \rightarrow 4)]- β -D-glucopyranosyl]-ceramide, monoammonium salt

Synonyms: Fucosyl G_{M1}, Fucosylated Monosialoganglioside G_{M1}

MF: C₇₉H₁₄₀N₃O₃₅ • NH₄ (for stearoyl)

FW: 1,710.0

Purity: \geq 98%

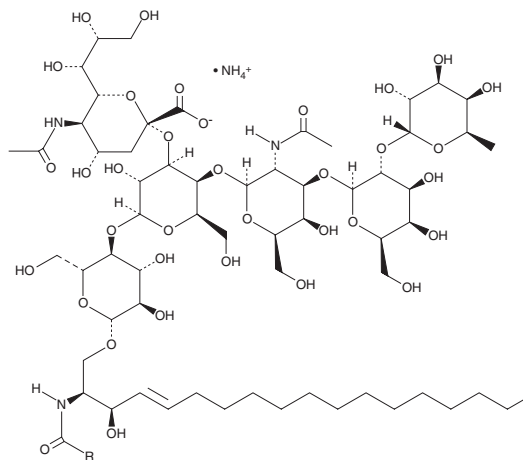
Supplied as: A solid

Storage: -20°C

Stability: \geq 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

Fucosylated ganglioside G_{M1} (porcine) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the fucosylated ganglioside G_{M1} (porcine) (ammonium salt) in the solvent of choice. Fucosylated ganglioside G_{M1} (porcine) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:DI water.

Description

Fucosylated ganglioside G_{M1} is a fucose-containing glycosphingolipid that was originally found in bovine thyroid tissue.¹ It has been found in isolated human small cell lung cancer (SCLC) tumors but is rarely found in other types of lung cancer tumors or normal tissue.² Fucosylated ganglioside G_{M1} is shed from SCLC cells *in vitro* and *in vivo* in SCLC nude mouse xenograft models and can be detected in human plasma.³ It binds to cholera toxin when expressed in rat C6 glioma cultured cells, increasing intracellular cAMP to similar levels as cells expressing ganglioside G_{M1} (Item No. 19579).⁴ This product contains fucosylated ganglioside G_{M1} molecular species with primarily C22:0 and C24:0 fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Macher, B.A., Pacuszka, T., Mullin, B.R., *et al.* Isolation and identification of a fucose-containing ganglioside from bovine thyroid gland. *Biochim Biophys. Acta.* **588(1)**, 35-43 (1979).
2. Vangsted, A.J. and Zeuthen, J. Monoclonal antibodies for diagnosis and potential therapy of small cell lung cancer--the ganglioside antigen fucosyl-G_{M1}. *Acta. Oncol.* **32(7-8)**, 845-851 (1993).
3. Vangsted, A.J., Clausen, H., Kjeldsen, T.B., *et al.* Immunochemical detection of a small cell lung cancer-associated ganglioside (FucG_{M1}) antigen in serum. *Cancer Res.* **51(11)**, 2879-2884 (1991).
4. Masserini, M., Freire, E., Calappi, E., *et al.* Fuc-GM1 ganglioside mimics the receptor function of GM1 for cholera toxin. *Biochemistry* **31(8)**, 2422-2426 (1992).

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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