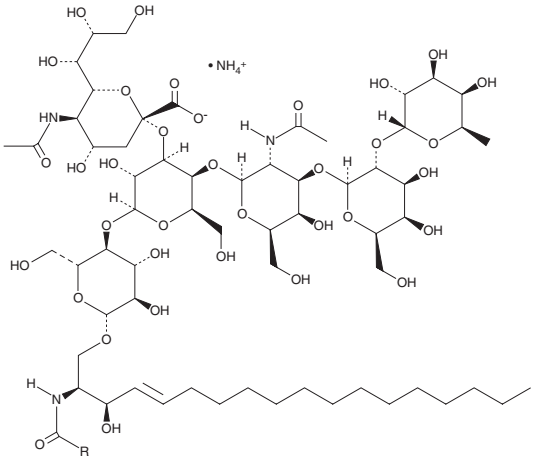
PRODUCT INFORMATION

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

Item No. 24838



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

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

MF: $C_{79}H_{140}N_3O_{35} \bullet NH_4$ (for stearoyl)

FW: 1,710.0

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

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).

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