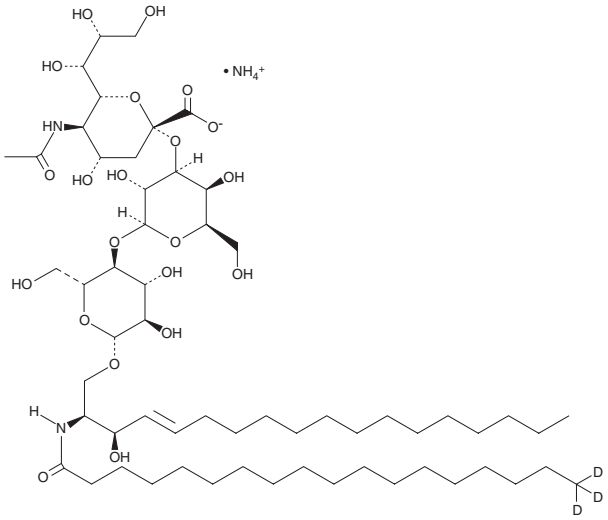
PRODUCT INFORMATION

C18 Ganglioside G_{M3}-d_3 (d18:1/18:0-d_3) (ammonium salt)

Item No. 24850

CAS Registry No.: 2692623-85-9
Formal Name: N-[(1S,2R,3E)-1-[[[O-(N-acetyl-α-neuraminosyl)-(2→3)-O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranosyl]oxy]methyl]-2-hydroxy-3-heptadecen-1-yl]-octadecanamide-18,18,18-d_3, monoammonium salt
Synonyms: C18 G_{M3}-d_3, Monosialoganglioside G_{M3}-d_3, N-Stearoyl Monosialoganglioside G_{M3}-d_3, N-*omega*-CD_3-Octadecanoyl monosialoganglioside G_{M3}
MF: $C_{59}H_{104}D_3N_2O_{21} \bullet NH_4$
FW: 1,201.5
Chemical Purity: ≥98% (C18 Ganglioside G_{M2} (d18:1/18:0))
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

C18 Ganglioside G_{M3}-d_3 (d18:1/18:0-d_3) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the C18 ganglioside G_{M3}-d_3 (d18:1/18:0-d_3) (ammonium salt) in the solvent of choice. C18 Ganglioside G_{M3}-d_3 (d18:1/18:0-d_3) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:DI water.

Description

C18 Ganglioside G_{M3}-d_3 is intended for use as an internal standard for the quantification of ganglioside G_{M3} (Item No. 15587) by GC- or LC-MS. Ganglioside G_{M3} is a simple monosialoganglioside that demonstrates both antiproliferative and proapoptotic effects in tumor cells by modulating cell adhesion, proliferation, and differentiation.[1,2] When used at a concentration of 20 µM, it suppresses angiogenesis and reduces endothelial cell proliferation and migration by inhibiting VEGFR2 and Akt phosphorylation.[1] Furthermore, ganglioside G_{M3} has been shown to induce the dissociation of the insulin receptor-caveolin-1 complex from lipid microdomains, functioning as an inhibitor of insulin signaling and contributing to insulin resistance.[3] *As this product is derived from a natural source, there may be variations in the sphingoid backbone.*

References

1. Mukherjee, P., Faber, A.C., Shelton, L.M., *et al.* Thematic review series: Sphingolipids. Ganglioside G_{M3} suppresses the proangiogenic effects of vascular endothelial growth factor and ganglioside GD1a. *J. Lipid Res.* **49(5)**, 929-938 (2008).
2. Seyfried, T.N. and Mukherjee, P. Ganglioside G_{M3} is antiangiogenic in malignant brain cancer. *J. Oncol.* 961243 (2010).
3. Kabayama, K., Sato, T., Saito, K., *et al.* Dissociation of the insulin receptor and caveolin-1 complex by ganglioside G_{M3} in the state of insulin resistance. *Proc. Natl. Acad. Sci. USA* **104(34)**, 13678-13683 (2007).

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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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM