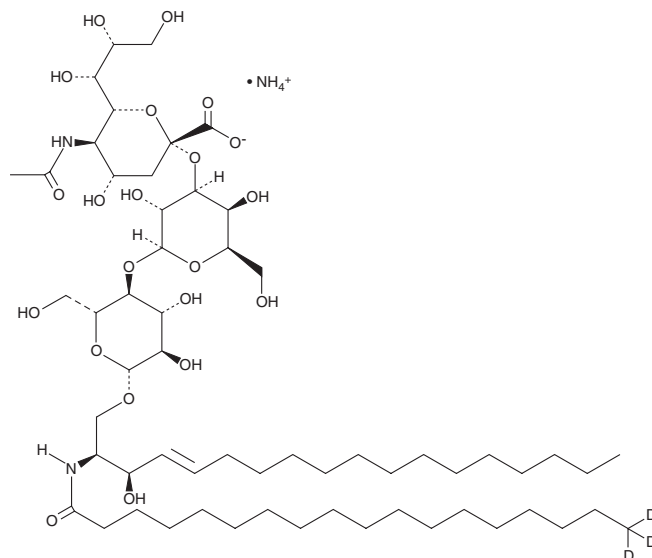


PRODUCT INFORMATION

C18 Ganglioside G_{M3}-d₃ (d18:1/18:0-d₃) (ammonium salt, synthetic) Item No. 39226

CAS Registry No.: 2692623-85-9
Formal Name: N-[(1S,2R,3E)-1-[[[O-(N-acetyl- α -neuraminosyl)-(2 $\rightarrow$ 3)-O- β -D-galactopyranosyl-(1 $\rightarrow$ 4)- β -D-glucopyranosyl]oxy]methyl]-2-hydroxy-3-heptadecen-1-yl]-octadecanamide-18,18,18-d₃, monoammonium salt
Synonyms: C18 G_{M3}-d₃, N- ω -CD₃-Octadecanoyl monosialoganglioside G_{M3}, Monosialoganglioside G_{M3}-d₃, N-Stearoyl Monosialoganglioside G_{M3}-d₃,
MF: C₅₉H₁₀₄D₃N₂O₂₁ • NH₄
FW: 1,201.6
Chemical Purity: $\geq$ 95% (Ganglioside G_{M3})
Deuterium Incorporation: $\geq$ 99% deuterated forms (d₁-d₃); $\leq$ 1% d₀
Supplied as: A solution in methanol
Storage: -20°C
Stability: $\geq$ 3 years



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

Laboratory Procedures

C18 Ganglioside G_{M3}-d₃ (d18:1/18:0-d₃) (ammonium salt, synthetic) is intended for use as an internal standard for the quantification of ganglioside G_{M3} (Item No. 15587) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

This product is fully synthetic and has no variations in the fatty acyl chain or sphingoid backbone. It is intended for use as an analytical standard for the quantification of C18 Ganglioside G_{M3} by mass spectrometry.

Description

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 μ M, 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

References

1. Mukherjee, P., Faber, A.C., Shelton, L.M., et al. *J. Lipid Res.* **49**(5), 929-938 (2008).
2. Seyfried, T.N. and Mukherjee, P. *J. Oncol.* 961243 (2010).
3. Kabayama, K., Sato, T., Saito, K., et al. *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.

WARRANTY AND LIMITATION OF REMEDY

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