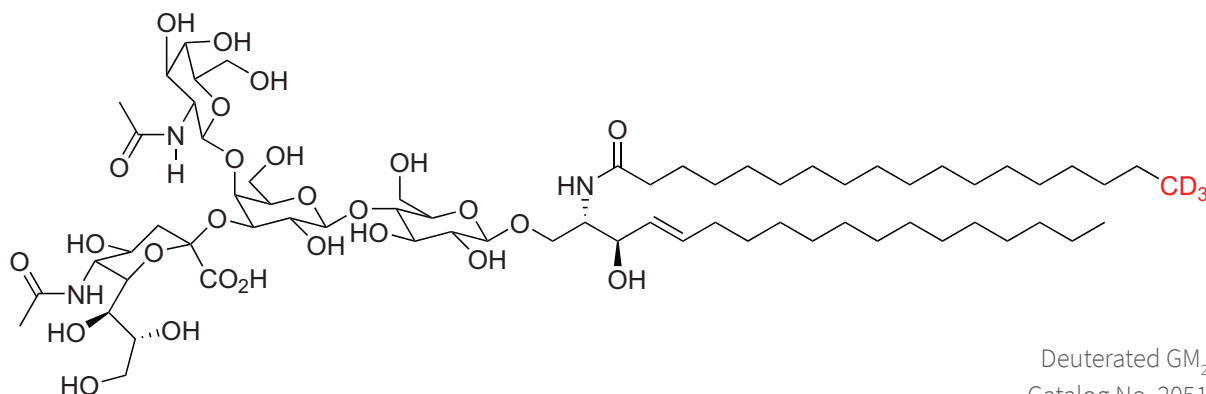


Deuterated Gangliosides for Mass Spectrometry



Deuterated gangliosides are ideal for the identification of natural gangliosides in samples and biological systems using mass spectrometry.¹ The fatty acid chain attached to the sphingosine is replaced with a deuterated stearic acid, ensuring that the physical properties of the gangliosides are nearly identical to those of natural gangliosides. This enables these products to be used as internal standards or substrates for enzymes with no change in extractability or enzyme activity.

Gangliosides are acidic glycosphingolipids that form lipid rafts in the outer leaflet of the cell plasma membrane, especially in neuronal cells of the central nervous system.^{2,3} They are involved in cellular proliferation, differentiation, adhesion, signal transduction, cell-to-cell interactions, tumorigenesis, and metastasis.⁴ These diverse functions also play a role in the development of various diseases and disorders. A precise understanding of ganglioside involvement in these processes will lead to a variety of strategies to prevent cancer development, lysosomal storage disorders, and Alzheimer's disease progression.

Catalog No.	Product Name	Size	Purity
2050	N- <i>omega</i> -CD ₃ -Octadecanoyl monosialoganglioside GM ₁ (NH ₄ ⁺ salt)	500 µg	98+%
2051	N- <i>omega</i> -CD ₃ -Octadecanoyl monosialoganglioside GM ₂ (NH ₄ ⁺ salt)	250 µg	98+%
2052	N- <i>omega</i> -CD ₃ -Octadecanoyl monosialoganglioside GM ₃ (NH ₄ ⁺ salt)	250 µg	98+%
2054	N- <i>omega</i> -CD ₃ -Octadecanoyl disialoganglioside GD ₃	500 µg	98+%

References:

1. J. Gu *et al.* (2008) Simultaneous quantification of G_{M1} and G_{M2} gangliosides by isotope dilution tandem mass spectrometry. *Clin. Biochem.*, Vol. 41(6) pp. 413-417
2. L. Svennerholm, *et al.* (eds.), "Structure and Function of Gangliosides", New York, Plenum, 1980
3. T. Kolter *et al.* (2002) Combinatorial Ganglioside Biosynthesis. *J. Biol. Chem.*, Vol. 277(29) pp. 25859-25862
4. S. Birklé *et al.* (2003) Role of tumor-associated gangliosides in cancer progression. *Biochimie*, Vol. 85(3-4) pp. 455-463

View Matreya's complete line of Gangliosides at www.matreya.com