

PRODUCT DATA SHEET

Ganglioside

Catalog No: 1512

Common Name: Asialo GM₂; Gg3

Source: semisynthetic, human

Solubility: chloroform/methanol/DI water
(2:1:0.1); Forms micellar solution
in water

CAS No: 35960-33-9

Molecular Formula: C₅₆H₁₀₄N₂O₁₈

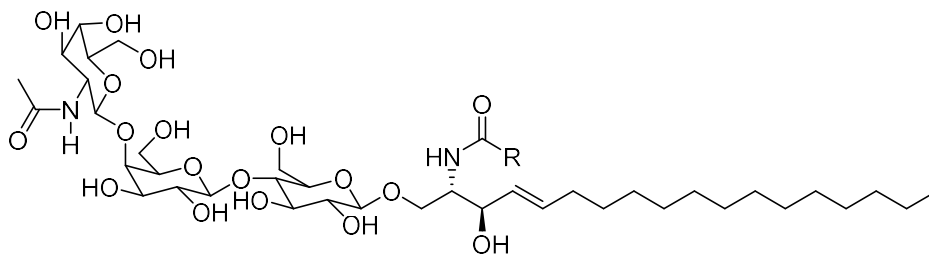
Molecular Weight: 1093 (stearoyl)

Storage: -20°C

Purity: TLC > 98%; identity confirmed by MS

TLC System: chloroform/methanol/2.5N
ammonium hydroxide (60:40:9
by Vol.)

Appearance: solid



Application Notes:

Gangliosides are being actively studied in many laboratories due to their involvement in numerous diseases. One of the most important examples of these diseases is the unusual accumulation of various gangliosides in tumor cells. This has led many researchers to explore ways to combat tumors using gangliosides and antibodies to gangliosides. Lymphoma has been shown to have an increased level of asialo-GM₂ and passive immunization with monoclonal immunoglobulin G3 antibodies to asialo-GM₂ has effectively suppressed tumor formation in these cells.¹ Asialo-GM₂ has been identified as a receptor for many types of bacteria including *Neisseria gonorrhoeae* and *Haemophilus influenzae*. In the metabolism of asialo-GM₂, the same enzyme that synthesizes GD₂ and GM₂ (*beta*-1,4 N-Acetylgalactosaminyltransferase) is also responsible for the synthesis asialo-GM₂.²

Selected References:

1. W. Young Jr and S. Hakomori "Therapy of mouse lymphoma with monoclonal antibodies to glycolipid: selection of low antigenic variants in vivo" *Science*, Vol. 211:4481 pp. 487-489, 1981
2. Young et al. "Cloned β 1,4 N-Acetylgalactosaminyltransferase Synthesizes G_{A2} as well as Gangliosides G_{M2} and G_{D2}" *Journal of Biological Chemistry*, Vol. 269:46 pp. 29227-29231, 1994

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