PRODUCT DATA SHEET

Monosialoganglioside GM₄ (NH₄⁺ salt)

Catalog No: 1535
Common Name: GM₄
Source: natural, egg, chicken
Solubility: chloroform/methanol (2:1)
          Forms micellar solution in water
CAS No: 66456-69-7
Molecular Formula: C₅₇H₁₀₆N₂O₁₇ • NH₃

Molecular Weight: 1091+NH₃ (2-hydroxydocosanoyl)
Storage: -20°C
Purity: TLC > 98%
TLC System: chloroform/ methanol/ 0.02%
calcium chloride (60:30:5 by Volume.)
Appearance: solid

Application Notes:
Gangliosides¹ are acidic glycosphingolipids that form lipid rafts in the outer leaflet of the cell plasma membrane, especially in neuronal cells in the central nervous system.² They participate in cellular proliferation, differentiation, adhesion, signal transduction, cell-to-cell interactions, tumorigenesis, and metastasis.³ The accumulation of gangliosides has been linked to several diseases including Tay-Sachs and Sandhoff disease. An autoimmune response against gangliosides can lead to Guillain-Barre syndrome. GM₄ is a monosialoganglioside located primarily in the central nervous system and was found to be a major component of myelin gangliosides.⁴ It was also found to be a specific marker for human myelin and oligodendrogial perikarya. However, in chicken cerebellum, GM₄ is associated with astrocytes, and not with myelin. GM₄ has been found to be the major ganglioside in chicken egg yolk, chicken embryonic liver, and frog liver.

Selected References:

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