

# PRODUCT DATA SHEET

## Monosialoganglioside Mixture (qualitative)

**Catalog No:** 1508

**Concentration:** 0.5mg/ml

**Quantity:** 1ml

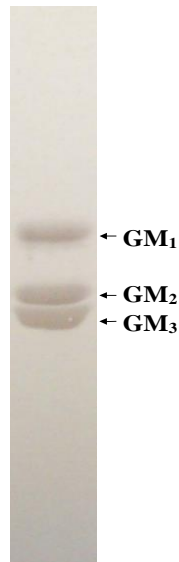
**Source:** natural, bovine and human

**Solvent:** chloroform/methanol/DI water  
(2:1:0.1)

**Components:** GM<sub>3</sub>, GM<sub>2</sub>, GM<sub>1</sub>

**TLC System:** chloroform/ methanol/ 0.02%  
aqueous calcium chloride  
(55:45:10 by vol.)

**Storage:** -20°C



### Application Notes:

This product contains the monosialogangliosides GM<sub>1</sub>, GM<sub>2</sub>, and GM<sub>3</sub> in approximately equal amounts. It is a qualitative mixture prepared from highly pure materials and is in chloroform/methanol/water (2:1:0.1). The defining characteristic of gangliosides is the sialic acid moiety of the oligosaccharide head group. This mixture contains gangliosides having one sialic acid. Gangliosides<sup>1</sup> 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.<sup>2</sup> They participate in cellular proliferation, differentiation, adhesion, signal transduction, cell-to-cell interactions, tumorigenesis, and metastasis.<sup>3</sup> 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. Gangliosides act as receptors for various toxins and bacteria, accumulate in different tumors, and aid in many neuronal functions. Therefore they are very important in therapeutic processes. This is a qualitative mixture and should not be used for quantitative purposes.

### Selected References:

1. L. Svennerholm et al. (eds.), *Structure and Function of Gangliosides*, New York, Plenum, 1980
2. T. Kolter, R. Proia, K. Sandhoff, "Combinatorial Ganglioside Biosynthesis" *J. Biol. Chem.*, Vol. 277:29 pp. 25859-25862, 2002
3. S. Birkle et al. "Role of tumor-associated gangliosides in cancer progression" *Biochimie*, Vol. 85 pp. 455-463, 2003

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.