

## PRODUCT DATA SHEET

### Mixed Gangliosides, purified, porcine (NH<sub>4</sub><sup>+</sup> salt)

**Catalog number:** 1525

**Common Name:** gangliosides

**Source:** natural, porcine

**Solubility:** chloroform/methanol/water  
(2:1:0.1); forms micellar solution in  
water

**Storage:** -20°C

**Purity:** TLC > 98%

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

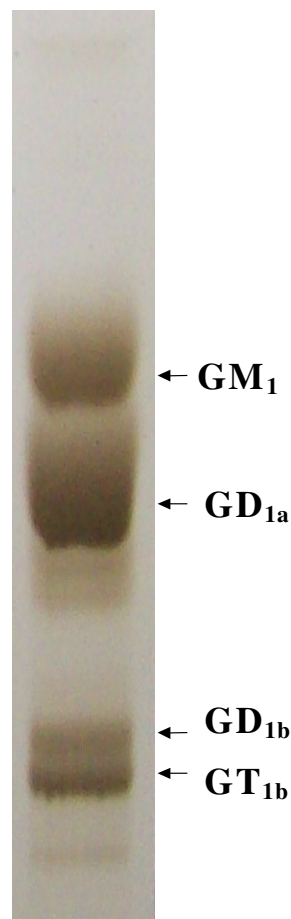
**Appearance:** solid

#### **Application Notes:**

This product contains a natural mixture of gangliosides (approximately 98% GM<sub>1</sub>, GD<sub>1a</sub>, GD<sub>1b</sub>, and GT<sub>1b</sub>) found in the central nervous system of adult bovine. The ratio of different gangliosides changes according to age, species, and organ. 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.

#### **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.* July Vol. 277, No. 29, pp. 25859-25862, 2002
3. S. Birkle, G. Zeng, L. Gao, R. K. Yu, and J. Aubry, Role of tumor-associated gangliosides in cancer progression. *Biochimie*, 85, 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.