

PRODUCT INFORMATION



Purified Ganglioside Mixture (bovine) (ammonium salt)

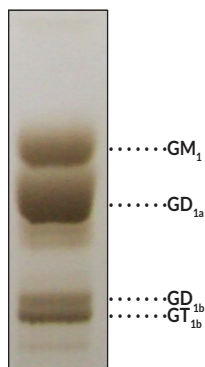
Item No. 24856

Purity: ≥98%
Mixture
Composition: Approximately 98% GM₁, GD_{1a}, GD_{1b}, GT_{1b}, remaining 2% other gangliosides.
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Forms micellar solution in water
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Purified ganglioside mixture (bovine) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the purified ganglioside mixture (bovine) (ammonium salt) in the solvent of choice. Purified ganglioside mixture (bovine) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:water.

Image



Description

Gangliosides are glycosphingolipids found in all vertebrate cells with particularly high levels found in the central nervous system.^{1,2} Gangliosides in the brain typically contain a saturated stearic acid as the fatty acyl chain, which is located in the outer leaflet of the plasma membrane with the ceramide chain, and a glycan group that faces outward and mediates cell-cell interactions. Gangliosides pack densely with cholesterol to form lipid microdomains that modulate both intra- and inter-cell signaling events. More than 180 gangliosides have been identified that differ based on the position and number of sialic acid residues. The expression of various gangliosides varies during development indicating specialized roles at distinct stages. Deficiencies in the synthesis or breakdown of gangliosides are associated with seizure and neurodegenerative disorders, respectively. They also regulate receptor function by direct association and receptor trafficking. Gangliosides have been implicated in tumorigenesis because they can modulate cell surface events including proliferation, migration, and adhesion.³ Cayman's Purified Ganglioside Mixture contains ganglioside molecular species with primarily C18:0 fatty acyl chain lengths. *As this product is derived from a natural source, there may be variations in the sphingoid backbone.*

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

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References

1. Yu, R.K., Tsai, Y.T., Ariga, T., *et al.* Structures, biosynthesis, and functions of gangliosides-an overview. *J. Oleo. Sci.* **60(10)**, 537-544 (2011).
2. Schnaar, R.L. Gangliosides of the vertebrate nervous system. *J. Mol. Biol.* **428(16)**, 3325-3336 (2016).
3. Seyfried, T.N. and Mukherjee, P. Ganglioside GM3 is antiangiogenic in malignant brain cancer. *J. Oncol.* 961243, (2010).

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ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

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