

PRODUCT INFORMATION



C18 Ganglioside G_{M1} (d18:1/18:0) (ammonium salt)

Item No. 42980

CAS Registry No.: 1329115-44-7

Formal Name: N-[(1S,2R,3E)-1-[[[O-β-D-galactopyranosyl-(1→3)-O-2-(acetyl-amino)-2-deoxy-β-D-galactopyranosyl-(1→4)-O-[N-acetyl-α-neuraminosyl-(2→3)]-O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranosyl]oxy]methyl]-2-hydroxy-3-heptadecen-1-yl]-octadecanamide, monoammonium salt

Synonyms: N-Octadecanoyl Monosialoganglioside G_{M1}, N-Stearoyl-G_{M1}, C18 G_{M1}, G_{M1} (18:1/18:0), G_{M1} (d18:1/C18:0), N-Stearoyl Monosialoganglioside G_{M1}

MF: C₇₃H₁₃₀N₃O₃₁ • NH₄

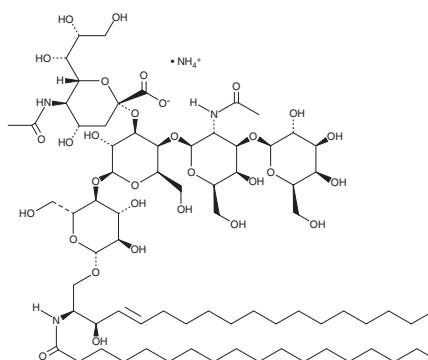
FW: 1,563.9

Purity: ≥98%

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

C18 Ganglioside G_{M1} (d18:1/18:0) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the C18 ganglioside G_{M1} (d18:1/18:0) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. C18 Ganglioside G_{M1} (d18:1/18:0) (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:water. C18 Ganglioside G_{M1} (d18:1/18:0) (ammonium salt) is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Ganglioside G_{M1} is a monosialylated ganglioside and the prototypic ganglioside for those containing one sialic acid residue.^{1,2} C18 Ganglioside G_{M1} is found in the brain, primarily in the piriform cortex, amygdala nucleus, striatum, and hippocampal CA1 region.³ The ratio of C18 ganglioside G_{M1} (d20:1/18:0) to C18 ganglioside G_{M1} (d18:1/18:0) is decreased in the outer molecular layer of the hippocampal dentate gyrus in postmortem tissue from patients with Alzheimer's disease.⁴

References

1. Kolter, T. Ganglioside biochemistry. *ISRN Biochem.* 506160 (2012).
2. Mocchetti, I. Exogenous gangliosides, neuronal plasticity and repair, and the neurotrophins. *Cell Mol. Life Sci.* **62**(19-20), 2283-2294 (2005).
3. Andres, A.D., Young, L.E.A., Gentry, M.S., *et al.* Spatial profiling of gangliosides in mouse brain by mass spectrometry imaging. *J. Lipid Res.* **61**(12), 1537 (2020).
4. Hirano-Sakamaki, W., Sugiyama, E., Hayasaka, T., *et al.* Alzheimer's disease is associated with disordered localization of ganglioside GM1 molecular species in the human dentate gyrus. *FEBS Lett.* **589**(23), 3611-3616 (2015).

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.

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