

# PRODUCT INFORMATION



## C16 Ganglioside G<sub>M1</sub>-d<sub>9</sub> (d18:1/16:0-d<sub>9</sub>) (ammonium salt)

Item No. 31195

CAS Registry No.: 2750534-76-8

Formal Name: N-[(1S,2R,3E)-1-[[[O-β-D-galactopyranosyl-(1→3)-O-2-(acetylamino)-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]-hexadecanamide-13,13,14,14,15,15,16,16,16-d<sub>9</sub>, monoammonium salt

Synonyms: C16 G<sub>M1</sub>-d<sub>9</sub>, N-Hexadecanoyl-d<sub>9</sub> (13,13,14,14,15,15,16,16,16)-monosialoganglioside G<sub>M1</sub>

MF: C<sub>71</sub>H<sub>117</sub>D<sub>9</sub>N<sub>3</sub>O<sub>31</sub> • NH<sub>4</sub>

FW: 1,544.9

Chemical Purity: ≥95% (C16 Ganglioside G<sub>M1</sub>)

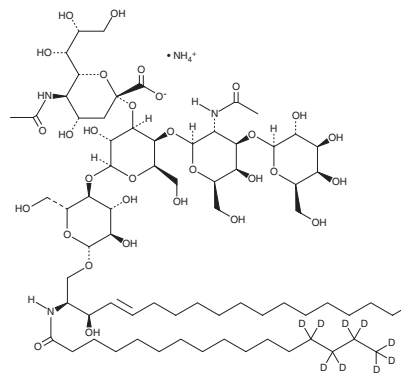
Deuterium

Incorporation: ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

### Laboratory Procedures

C16 Ganglioside G<sub>M1</sub>-d<sub>9</sub> (d18:1/16:0-d<sub>9</sub>) (ammonium salt) is intended for use as an internal standard for the quantification of C16 ganglioside G<sub>M1</sub> by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

### Description

Ganglioside G<sub>M1</sub> is a monosialylated ganglioside and the prototypic ganglioside for those containing one sialic acid residue.<sup>1,2</sup> C16 Ganglioside G<sub>M1</sub> (d18:1/16:0) is a monosialylated ganglioside that contains a 16-carbon saturated acyl chain. It has been found in the brain of wild-type mice and mice lacking the gene for α-N-acetylneuraminidase α-2,8-sialyltransferase (*St8sia1null*) but not those lacking the gene for β-1,4-N-acetylgalactosaminyltransferase 1 (*B4galnt1null*).<sup>3</sup> As this product is derived from a natural source, there may be variations in the sphingoid backbone.

### 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. Mlinac, K., Fabris, D., Vukelić, Ž., *et al.* Structural analysis of brain ganglioside acetylation patterns in mice with altered ganglioside biosynthesis. *Carbohydr. Res.* 382, 1-8 (2013).

#### 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

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