

## Ganglioside GM3 (sodium salt)

**Cat. No.** GM3-9001    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Product Overview</b> | Ganglioside GM3 is a simple monosialoganglioside that demonstrates both antiproliferative and proapoptotic effects in tumor cells by modulating cell adhesion, proliferation, and differentiation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>Gangliosides are formed from a glycosphingolipid combined with one or more sialic acids at the oligosaccharide chain. They are anchored at the outer surface of the plasma membrane where they pack densely with cholesterol to form lipid microdomains that modulate both intra- and inter-cell signaling events. Gangliosides are often implicated in tumorigenesis since they can modulate cell surface events including proliferation, migration, and adhesion. Ganglioside GM3 is a simple monosialoganglioside that demonstrates both antiproliferative and proapoptotic effects in tumor cells by modulating cell adhesion, proliferation, and differentiation. At 20 <math>\mu</math>M, it can suppress angiogenesis and reduce endothelial cell proliferation and migration by inhibiting VEGFR2 and Akt phosphorylation. Furthermore, ganglioside GM3 has been shown to induce the dissociation of the insulin receptor-caveolin-1 complex from lipid microdomains, functioning as an inhibitor of insulin signaling and contributing to insulin resistance.</p> |
| <b>Form</b>             | A lyophilized solid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Molecular Mass</b>   | 1203.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Purity</b>           | >98%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|------------------|------------------------------------------------------------------------------------------------------|
| <b>Stability</b> | As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly. |
| <b>Storage</b>   | -20°C                                                                                                |
| <b>Shipping</b>  | Room temperature in continental US; may vary elsewhere.                                              |

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