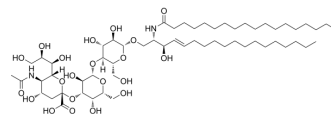


Ganglioside GM3

Cat. No.: HY-114456
CAS No.: 124579-05-1
Molecular Formula: C₅₉H₁₀₈N₂O₂₁
Molecular Weight: 1181.49
Target: Others
Pathway: Others
Storage: 4°C, protect from light
 * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (105.80 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		0.8464 mL	4.2319 mL	8.4639 mL
	5 mM		0.1693 mL	0.8464 mL	1.6928 mL
	10 mM		0.0846 mL	0.4232 mL	0.8464 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Ganglioside GM3 is a precursor of a-, b-, and c-series gangliosides, interacts with transmembrane receptors such as the epidermal growth factor and insulin receptors, and regulates receptor functions by creating a specialized lipid environment. Ganglioside GM3 is synthesized by GM3 synthase and can be used for the research of hypercholesterolemia^[1].

In Vitro

Ganglioside GM3, produced by addition of sialic acid to LacCer, is expressed mainly in adipose tissue and muscle in humans and mice, and liver and serum in humans. GM3 expression in adipocytes is induced by stimulation of the inflammatory cytokines TNF-α and IL-1β, derived from tissue macrophages^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Nihei W, et al. NPC1L1-dependent intestinal cholesterol absorption requires ganglioside GM3 in membrane microdomains. J Lipid Res. 2018 Nov;59(11):2181-2187.
- [2]. Inokuchi JI, et al. Pathophysiological Significance of GM3 Ganglioside Molecular Species With a Particular Attention to the Metabolic Syndrome Focusing on Toll-Like Receptor 4 Binding. Front Mol Biosci. 2022 May 30;9:918346.

Caution: Product has not been fully validated for medical applications. For research use only.

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