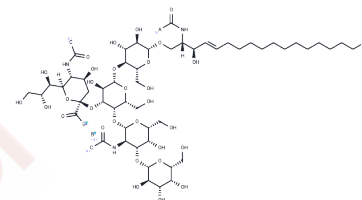


Ganglioside GM1 Mixture (ovine) (ammonium salt)

Chemical Properties

CAS No. : 1007119-81-4
 Formula: C73H130N3O31.NH4 (for stearyl)
 Molecular Weight: 1563.9
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	<p>Ganglioside GM1 is a monosialylated ganglioside and the prototypic ganglioside for those containing one sialic acid residue.^{1,2} It is found in a large variety of cells, including immune cells and neurons, and is enriched in lipid rafts in the cell membrane.³ It associates with growth factor receptors, including TrkA, TrkB, and the GDNF receptor complex containing Ret and GFRα, and is required for TrkA expression on the cell surface. Ganglioside GM1 interacts with other proteins to increase calcium influx, affecting various calcium-dependent processes, including inducing neuronal outgrowth during differentiation. Ganglioside GM1 acts as a receptor for cholera toxin, which binds to its oligosaccharide group, facilitating toxin cell entry into epithelial cells of the jejunum.^{4,5} Similarly, it is bound by the heat-labile enterotoxin from <i>E. coli</i> in the pathogenesis of traveler's diarrhea.⁶ Ganglioside GM1 gangliosidosis, characterized by a deficiency in GM1-β-galactosidase, the enzyme that degrades ganglioside GM1, leads to accumulation of the gangliosides GM1 and GA1 in neurons and can be fatal in infants.¹ Levels of ganglioside GM1 are decreased in the substantia nigra pars compacta in postmortem brain from patients with Parkinson's disease.³ Ganglioside GM1 mixture contains a mixture of ovine ganglioside GM1 molecular species with primarily C18:0 fatty acyl chain lengths, among various others.</p>
Targets(IC50)	Others

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6394 mL	3.1971 mL	6.3943 mL
5 mM	0.1279 mL	0.6394 mL	1.2789 mL
10 mM	0.0639 mL	0.3197 mL	0.6394 mL
50 mM	0.0128 mL	0.0639 mL	0.1279 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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