Data Sheet (Cat.No.T36413)

N-glycolyl-Ganglioside GM3 Mixture (ammonium salt)

Chemical Properties
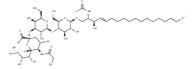
CAS No. :	69345-49-9
Formula：	C64H117N2O22NH4
Molecular Weight：	1284.7
Appearance：	no data available
Storage：	Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	N-glycolyl-Ganglioside GM3(NeuGc-GM3) is a form of ganglioside GM3 that contains an N-glycolylated sialic acid (NeuGc).
In vitro	It is not biosynthesized in humans under baseline conditions due to a mutation in CMP-Neu5Ac hydroxylase (CMAH), which converts N-acetyl sialic acid to N-glycolyl sialic acid, but NeuGc can be taken up by human cellsviathe diet and incorporated into glycolipids, such as ganglioside GM3.1,2NeuGc-GM3 impairs differentiation and maturation of dendritic cellsin vitroand reduces CD4 expression in non-activated T cells.1,3It increases the number of lung tumor nodules formed in a murine Lewis lung carcinoma model.4It is found in a variety of human cancers, including breast and lung cancers, as well as pediatric cancers.1Levels of NeuGc-GM3 are negatively correlated with the number of mature dendritic cells in patient-derived non-small cell lung cancer (NSCLC) tumor tissue.5Anti-NeuGc-GM3 antibodies, able to destroy tumor cells in vitro, have been found in individuals without cancer but not in patients with NSCLC.1,6N-glycolyl-Ganglioside GM3mixture contains ganglioside GM3molecular species with primarily C22:0, C23:0, and C24:0 fatty acyl chain lengths.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7784 mL	3.892 mL	7.7839 mL
5 mM	0.1557 mL	0.7784 mL	1.5568 mL
10 mM	0.0778 mL	0.3892 mL	0.7784 mL
50 mM	0.0156 mL	0.0778 mL	0.1557 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.

Reference

Labrada, M., Dorvignit, D., Hevia, G., et al.GM3(Neu5Gc) ganglioside: An evolution fixed neoantigen for cancer immunotherapySemin. Oncol.45(1-2)41-51(2018)