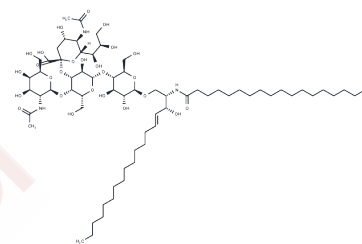


## Ganglioside GM2

## Chemical Properties

CAS No. :	127663-77-8
Formula:	C <sub>67</sub> H <sub>121</sub> N <sub>3</sub> O <sub>26</sub>
Molecular Weight:	1384.68
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Ganglioside GM2 is a component of the cell membrane's glycosphingolipid bilayer and a human tumor antigen (OFA-I-1). It accumulates and increases in models of Sandhoff disease, Niemann-Pick disease, and Tay-Sachs disease, among others. Ganglioside GM2 binds to the integrin $\beta$ 1 receptor, activating the FAK/Src/Erk-MAPK signaling pathway, thereby promoting tumor cell migration and invasion.
Targets(IC50)	ERK,FAK,Src
In vitro	Ganglioside GM2 (25 $\mu$ M, 24 hours) significantly enhances the migration and invasion capabilities of SK-RC-45 tumor cells [1].

## Solubility Information

Solubility	DMSO: 10 mg/mL (7.22 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7222 mL	3.6109 mL	7.2219 mL
5 mM	0.1444 mL	0.7222 mL	1.4444 mL
10 mM	0.0722 mL	0.3611 mL	0.7222 mL
50 mM	0.0144 mL	0.0722 mL	0.1444 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

Kundu M, et al. Ganglioside GM2 mediates migration of tumor cells by interacting with integrin and modulating the downstream signaling pathway. *Biochim Biophys Acta*. 2016 Jul;1863(7 Pt A):1472-89.

Tai T, et al. Ganglioside GM2 as a human tumor antigen (OFA-I-1). *Proc Natl Acad Sci U S A*. 1983 Sep;80(17):5392-6.

Sandhoff K, et al. Gangliosides and gangliosidoses: principles of molecular and metabolic pathogenesis. *J Neurosci*. 2013 Jun 19;33(25):10195-208.

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