



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

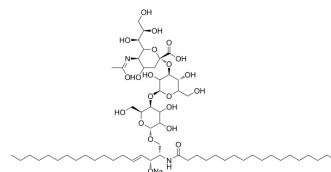
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

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## Monosialoganglioside GM3 (bovine)

|                    |                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-W342441                                                                                |
| CAS No.:           | 54827-14-4                                                                                |
| Molecular Formula: | C <sub>59</sub> H <sub>106</sub> N <sub>2</sub> NaO <sub>21</sub> <sup>-</sup>            |
| Molecular Weight:  | 1202.46                                                                                   |
| Target:            | VEGFR; Akt; Ferroptosis; Insulin Receptor                                                 |
| Pathway:           | Protein Tyrosine Kinase/RTK; PI3K/Akt/mTOR; Apoptosis                                     |
| Storage:           | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

#### Description

Monosialoganglioside GM3 (bovine) is a monosialoganglioside and an inhibitor of VEGFR2 and Akt. At a concentration of 20  $\mu$  M, Monosialoganglioside GM3 inhibits angiogenesis and reduces the proliferation and migration of human umbilical vein endothelial cells (HUVECs) by inhibiting VEGFR2 and Akt phosphorylation. Ganglioside GM3 also inhibits ferroptosis, providing protective effects during the formation of abdominal aortic aneurysms. Additionally, Monosialoganglioside GM3 (bovine) acts as an inhibitor of insulin signaling, inducing the dissociation of the insulin receptor (IR)-Caveolin-1 complex from lipid microdomains and causing insulin resistance in adipocytes. Monosialoganglioside GM3 (bovine) can be used in cancer and metabolic disease research<sup>[1]</sup>.

### REFERENCES

- [1]. Zhang F, et al. Ganglioside GM3 Protects Against Abdominal Aortic Aneurysm by Suppressing Ferroptosis. *Circulation*. 2024 Mar 12;149(11):843-859.
- [2]. Mukherjee P, et al. Thematic review series: sphingolipids. Ganglioside GM3 suppresses the proangiogenic effects of vascular endothelial growth factor and ganglioside GD1a. *J Lipid Res*. 2008 May;49(5):929-38.
- [3]. Seyfried TN, et al. Ganglioside GM3 Is Antiangiogenic in Malignant Brain Cancer. *J Oncol*. 2010;2010:961243.
- [4]. Kabayama K, et al. Dissociation of the insulin receptor and caveolin-1 complex by ganglioside GM3 in the state of insulin resistance. *Proc Natl Acad Sci U S A*. 2007 Aug 21;104(34):13678-83.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA