



Ganglioside GM3 from bovine brain, sodium salt

Cat. No.:	OB0626WX-2563
Appearance:	Lyophilized solid
Purity:	≥98%
Identity:	Confirmed by NMR and TLC.
Size:	1 mg; 2 mg; 5 mg; 10 mg

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	Ganglioside GM3 is a foundational monosialoganglioside structure possessing a predominantly C18:0 fatty acyl chain linked to a natural sphingoid backbone, known for its extensive regulatory control over cellular proliferation, adhesion, and apoptotic pathways. This bioactive glycosphingolipid impairs vascular endothelial growth factor receptor 2 and Akt phosphorylation cascades to suppress angiogenic cell migration, while simultaneously orchestrating the dissociation of receptor complexes from membrane microdomains to modulate insulin signaling networks.
Synonyms	Hematoside Sialosyllactosylceramide; G(M3) Ganglioside; Hematoside; Sialyllactosylceramide; Ganglioside GM3; II3NeuAcLacCer; Sialyl Lactosylceramide; 54827-14-4
CAS No.	54827-14-4
Compound CID	86583360
Formula	$C_{59}H_{107}N_2O_{21} \cdot Na$ (for tricosanoyl)
Formula Weight	1203.5

Specification

Source	Bovine brain
IUPAC Name	(2S,4S,5R,6R)-5-acetamido-2-[(2S,3R,4 <i>S</i> ,5S,6R)-2-[(2R,3S,4R,5R,6R)-4,5-dihydroxy-2-(hydroxymethyl)-6-[(E,2S,3R)-3-hydroxy-2-[(Z)-tetracos-15-enoyl]amino]octadec-4-enoyl]oxan-3-yl]oxy-3,5-dihydroxy-6-(hydroxymethyl)oxan-4-yl]oxy-4-hydroxy-6-[(1R,2R)-1,2,3-trihydroxypropyl]oxane-2-carboxylic acid



InChI	InChI=1S/C59H108N2O21.Na/c1-4-6-8-10-12-14-16-18-19-21-23-25-27-29-31-33-46(69)61-40(41(66)32-30-28-26-24-22-20-17-15-13-11-9-7-5-2)38-77-56-51(73)50(72)53(45(37-64)79-56)80-57-52(74)55(49(71)44(36-63)78-57)82-59(58(75)76)34-42(67)47(60-39(3)65)54(81
InChI Key	GGQRTSSCXQEZNW-BLVJLERSA-M
Canonical SMILES	<chem>O[C@@H]1[C@@H]([C@H]([C@@H](O[C@@H]1CO)O[C@H]2[C@@H]([C@H]([C@@H](O[C@@H]2CO)OC[C@@]([H])([C@](O)(/C=C/CCCCCCCCCCCC)[H])NC(CCCCCCCCCCCCCCCCCC)=O)O)O)O[C@]3(O[C@H]([C@@H]([C@H](C3)O)NC(C)=O)[C@@]([H])([C@]([H])(O)CO)O)C([O-])=O.[Na+]</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	Ganglioside GM3 from bovine brain, sodium salt is utilized in studies of glycosphingolipid metabolism, membrane organization, and lipid composition analysis. It provides a reference standard for ganglioside identification, lipidomic profiling, and investigations of carbohydrate-containing lipid structures.