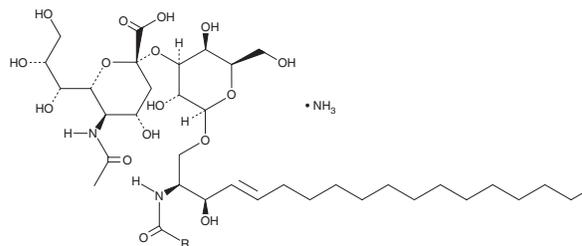


PRODUCT INFORMATION



Ganglioside G_{M4} (chicken egg) (ammonium salt) Item No. 24851

Formal Name: ganglioside G_{M4}, monoammonium salt
Synonyms: Ganglioside G₇, Monosialoganglioside G_{M4}
MF: C₅₇H₁₀₆N₂O₁₇ • NH₃ (for 2-hydroxydocosanoyl)
FW: 1,108.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ganglioside G_{M4} (chicken egg) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G_{M4} (chicken egg) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G_{M4} (chicken egg) (ammonium salt) is soluble in a 2:1 solution of chloroform:methanol.

Description

Ganglioside G_{M4} is a sialic acid-containing glycosphingolipid found primarily in the brain of mammals, particularly in human myelin.¹ Ganglioside G_{M4} is also found on epithelial cells in the intestinal tract of the red sea bream where it is an attachment site for Gram-negative *Vibrios*, the bacteria that causes vibriosis in humans after ingestion of raw or undercooked seafood.² Ganglioside G_{M4} species have been found as 11 out of 61 gangliosides detected in an adrenal neuroblastoma tumor.³ Administration of ganglioside G_{M4} (80 and 160 μg) prevents development of myelin basic protein-induced experimental autoimmune encephalomyelitis (EAE) in guinea pigs.⁴ This product contains ganglioside G_{M4} molecular species with primarily 2-hydroxy C22:0, 2-hydroxy C24:0, and 2-hydroxy C23:0 fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Ueno, K., Ando, S., and Yu, R.K. Gangliosides of human, cat, and rabbit spinal cords and cord myelin. *J. Lipid Res.* **19(7)**, 863-871 (1978).
2. Chisada, S., Shimizu, K., Kamada, H., *et al.* *Vibrios* adhere to epithelial cells in the intestinal tract of red sea bream, *Pagrus major*, utilizing GM4 as an attachment site. *FEMS Microbiol. Lett.* **341(1)**, 18-26 (2013).
3. Robu, A.C., Vukelić, Ž., Schiopu, C., *et al.* Mass spectrometry of gangliosides in extracranial tumors: Application to adrenal neuroblastoma. *Anal. Biochem.* **509**, 1-11 (2016).
4. Mullin, B.R., Patrick, D.H., Poore, C.M., *et al.* Prevention of experimental allergic encephalomyelitis by ganglioside G_{M4}. *Brain Res.* **296(1)**, 174-176 (1984).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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