

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# PRODUCT INFORMATION



## Ganglioside G<sub>M4</sub> Mixture (ammonium salt)

Item No. 24851

MF:

Formal Name: ganglioside G<sub>M4</sub>, monoammonium salt Ganglioside  $G_{7}$ , Monosialoganglioside  $G_{M4}$ Synonyms:

 $C_{57}H_{106}N_2O_{17} \bullet NH_3$  (for 2-hydroxydocosanoyl)

FW: **Purity:** ≥98% Supplied as: A solid -20°C Storage: Stability: ≥2 years

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

#### **Laboratory Procedures**

Ganglioside  $G_{M4}$  mixture (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside  $G_{M4}$  mixture (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside  $G_{M4}$  mixture (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. Administration of ganglioside  $G_{M4}$ (80 and 160 µg) prevents development of myelin basic protein-induced experimental autoimmune encephalomyelitis (EAE) in guinea pigs.<sup>4</sup> Ganglioside G<sub>M4</sub> mixture contains ganglioside G<sub>M4</sub> molecular species with fatty acyl chains of variable lengths.

#### 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).
- 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).
- Mullin, B.R., Patrick, D.H., Poore, C.M., et al. Prevention of experimental allergic encephalomyelitis by ganglioside G<sub>M4</sub>. Brain Res. 296(1), 174-176 (1984).

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

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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