

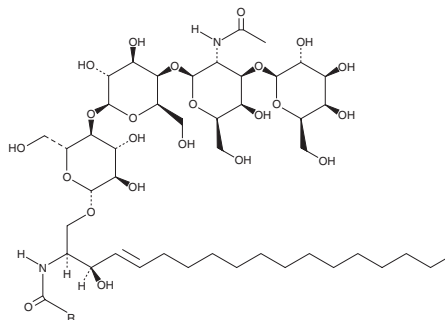
PRODUCT INFORMATION



Asialo Ganglioside G_{M1}

Item No. 15586

CAS Registry No.: 71012-19-6
Synonyms: ASG_{M1}, Asialo G_{M1},
Gangliotetraosylceramide
MF: C₆₂H₁₁₄N₂O₂₃ (for stearoyl)
FW: 1,255.6
Purity: ≥98%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Asialo ganglioside G_{M1} is supplied as a lyophilized powder. A stock solution may be made by dissolving the asialo ganglioside G_{M1} in the solvent of choice. Asialo ganglioside G_{M1} is soluble in chloroform:methanol (2:1).

Description

Asialo ganglioside G_{M1} is a component of cellular lipid rafts and can be formed by the cleavage of the sialic acid residue from ganglioside G_{M1} (Item No. 19579) by neuraminidase.^{1,2} Asialo ganglioside G_{M1} is a glycolipid receptor for *P. aeruginosa* flagellin and stimulates defensive responses in host cells, including extracellular ATP release, calcium mobilization, and ERK1/2 phosphorylation when stimulated by flagellin and an anti-asialo ganglioside G_{M1} antibody.³ The percentage of asialo ganglioside G_{M1}-positive natural killer (NK) and CD8⁺ T cells in lung is increased in a mouse model of respiratory syncytial virus (RSV) infection compared with healthy animals.¹ Depletion of asialo ganglioside G_{M1}-positive NK and T cells reduces IFN-γ levels in the lung, reduces weight loss, and increases lung viral load in RSV-infected mice. This product contains ganglioside G_{M1} molecular species with primarily C18:0 fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

References

1. Moore, M.L., Chi, M.H., Goleniewska, K., *et al.* Differential regulation of GM1 and asialo-GM1 expression by T cells and natural killer (NK) cells in respiratory syncytial virus infection. *Viral Immunol.* **21(3)**, 327-339 (2008).
2. Sabesan, S. and Lemieux, R.U. Synthesis of tri- and tetrasaccharide haptens related to the Asialo forms of the gangliosides G_{M2} and G_{M1}. *Can. J. Chem.* **62(4)**, 644-654 (1984).
3. McNamara, N., Khong, A., McKemy, D., *et al.* ATP transduces signals from ASGM1, a glycolipid that functions as a bacterial receptor. *Proc. Natl. Acad. Sci. USA* **98(16)**, 9086-9091 (2001).

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.

WARRANTY AND LIMITATION OF REMEDY

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