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## Produktinformation



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# PRODUCT INFORMATION



## Ganglioside G<sub>M1</sub> Asialo Mixture

Item No. 15586

CAS Registry No.: 71012-19-6

Synonyms: ASG<sub>M1</sub> Mixture, Asialo G<sub>M1</sub> Mixture, Gangliotetraosylceramide Mixture

MF: C<sub>62</sub>H<sub>114</sub>N<sub>2</sub>O<sub>23</sub> (for stearoyl)

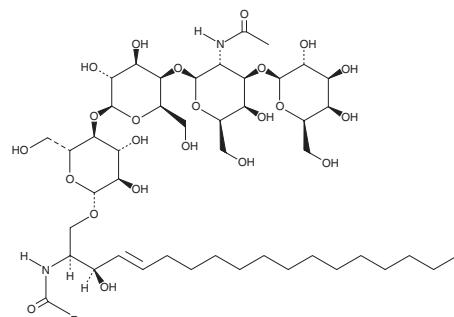
FW: 1,255.6

Purity: ≥98%

Supplied as: A lyophilized powder

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<sub>M1</sub> asialo mixture is supplied as a lyophilized powder. A stock solution may be made by dissolving the ganglioside G<sub>M1</sub> asialo mixture in the solvent of choice. Ganglioside G<sub>M1</sub> asialo mixture is soluble in chloroform:methanol (2:1).

### Description

Ganglioside G<sub>M1</sub> asialo is a component of cellular lipid rafts and can be formed by the cleavage of the sialic acid residue from ganglioside G<sub>M1</sub> (Item No. 19579) by neuraminidase.<sup>1,2</sup> Ganglioside G<sub>M1</sub> asialo 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-ganglioside G<sub>M1</sub> asialo antibody.<sup>3</sup> The percentage of ganglioside G<sub>M1</sub> asialo-positive natural killer (NK) and CD8<sup>+</sup> T cells in lung is increased in a mouse model of respiratory syncytial virus (RSV) infection compared with healthy animals.<sup>1</sup> Depletion of ganglioside G<sub>M1</sub> asialo-positive NK and T cells reduces IFN-γ levels in the lung, reduces weight loss, and increases lung viral load in RSV-infected mice. Ganglioside G<sub>M1</sub> asialo mixture contains ganglioside G<sub>M1</sub> asialo molecular species with C18:1 and C20:1 sphingoid backbones.

### 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<sub>M2</sub> and G<sub>M1</sub>. *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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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