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PRODUCT INFORMATION

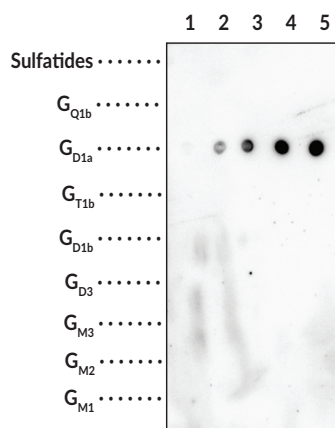


Ganglioside G_{D1a} Monoclonal Antibody Item No. 38295

Overview and Properties

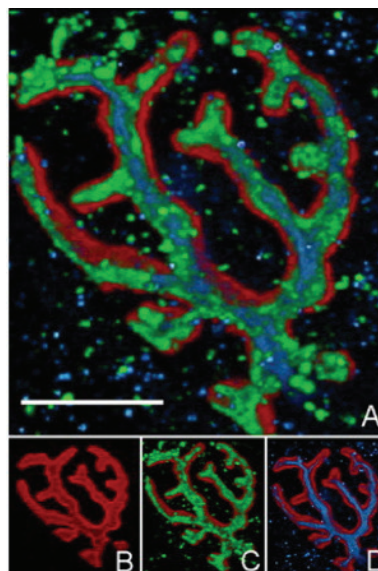
Contents:	This vial contains 100 µg of protein G-purified monoclonal antibody.
Synonyms:	Disialoganglioside G _{D1a} , Ganglioside B ₁ , Ganglioside G ₃
Immunogen:	Ganglioside G _{D1a} -KLH
Cross Reactivity:	(+) Ganglioside G _{D1a} ; (-) Ganglioside G _{D1b} , Ganglioside G _{D3} , Ganglioside G _{M1} , Ganglioside G _{M2} , Ganglioside G _{M3} , Ganglioside G _{Q1b} , Sulfatides
Species Reactivity:	(+) Species independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2, containing 50% glycerol and 0.02% sodium azide
Clone:	MOG35
Host:	Mouse
Isotype:	IgG2b
Applications:	Dot blot, ELISA, Immunofluorescence (IF), and Thin Layer Chromatography (TLC) Immunostaining; the recommended starting dilution for dot blot is 1:500-1:1,000, 1:1,000 for ELISA, 1:10-1:50 for IF, and 1:500 for TLC immunostaining. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: 10 ng
Lane 2: 25 ng
Lane 3: 50 ng
Lane 4: 100 ng
Lane 5: 150 ng

Dot blot against gangliosides using Ganglioside G_{D1a} Monoclonal Antibody.¹



Immunofluorescent localization of Ganglioside G_{D1a} Monoclonal Antibody at GD3s^{-/-} triangularis sterni neuromuscular junctions (NMJs). A merge of B, BTx (AChRs) C, MOG-35 (green), D, neurofilament (anti-NF) (blue).¹

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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PRODUCT INFORMATION



Description

Ganglioside G_{D1a} (Item Nos. 31591 | 15585 | 31707) is a sialic acid-containing glycosphingolipid that has been found in brain, erythrocytes, bone marrow, testis, spleen, and liver, as well as in serum lipoproteins.^{2,3} It is formed by the transfer of N-acetylneuraminic acid (Neu5Ac; Item No. 16091) to the precursor ganglioside G_{M1a} by CMP-N-acetylneuraminase- β -galactosamide- α -2,3-sialyltransferase 2 (ST3Gal-II).⁴ It functions as a toll-like receptor 2 (TLR2) co-receptor in isolated human monocytes, colocalizing with TLR2 and enhancing the binding of type IIb *E. coli* enterotoxin (LT-IIb-B₅) to TLR2.⁵ Ganglioside G_{D1a} also mediates polyomavirus entry into host cells.⁶ Ganglioside G_{D1a} is shed into the tumor microenvironment from the surface of tumor cells, where it influences tumor-host cell interactions to promote tumor cell proliferation, invasion, and metastasis, as well as increases VEGF-induced proliferation of human umbilical vein endothelial cells (HUVECs). A monoclonal antibody targeting ganglioside G_{D1a} and ganglioside G_{T1b} (Item Nos. 31712 | 15588 | 31592) inhibits axon regeneration in a mouse model of sciatic nerve crush-induced peripheral nervous system injury.⁷ Ganglioside G_{D1a} accumulates in the CNS of patients with galactosialidosis, a lysosomal storage disorder.⁸ Cayman's Ganglioside G_{D1a} Monoclonal Antibody can be used for dot blot, ELISA, immunofluorescence (IF), and TLC immunostaining applications.

References

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