

PRODUCT INFORMATION

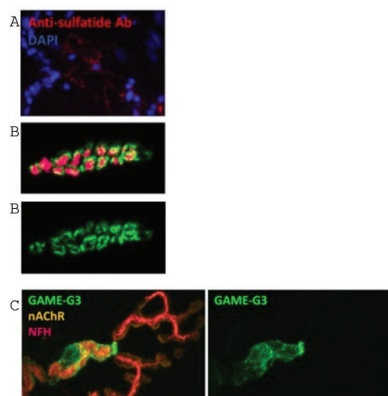
Sulfatide Recombinant Monoclonal Antibody (Clone GAMEG3)

Item No. 44723

Overview and Properties

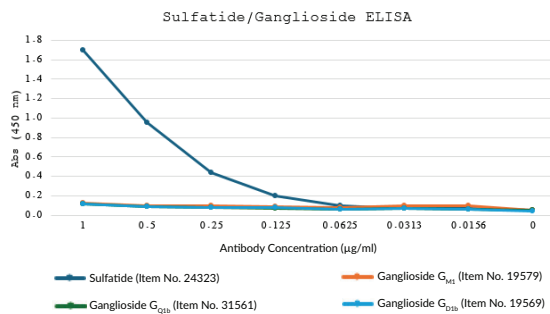
Contents:	This vial contains 50 µg protein A-purified recombinant monoclonal antibody.
Synonyms:	Galactosylceramide I ³ -sulfate, Ganglioside SM ₄ , I ³ SO ₃ -GalCer, SM ₄ , Sulfated Galactocerebroside, 3-O-Sulfogalactosylceramide, Sulphatide
Immunogen:	Sulfatide liposomes
Cross Reactivity:	(+++ Sulfatide, (+) Ganglioside G _{M1} ; (-) Other gangliosides
Species Reactivity:	(+) Species independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone:	GAMEG3
Host:	HEK293 cells
Isotype:	IgG3
Applications:	ELISA and Immunofluorescence (IF); the recommended starting dilution is 1:50 (2 µg/ml) for ELISA. Other applications were not tested; therefore, optimal working concentration/dilution should be determined empirically.

Images



Immunofluorescence staining of mouse cell preparations. A) Mouse CNS myelinating cultures were incubated with an anti-sulfatide IgG3 antibody (Clone GAMEG3) (red) at 10 µg/ml followed by a fluorescent secondary antibody and DAPI. B) Phrenic nerve-diaphragm nerve-muscle sections were blocked, incubated with the anti-sulfatide IgG3 antibody (Clone GAMEG3) (green) at 10 µg/ml and mouse anti-phosphorylated neurofilament H (NFH) antibody (magenta), followed by fluorescent secondary antibodies. C) Ex vivo phrenic nerve-diaphragm nerve-muscle preparations were prepared as described in B, then incubated with fluorophore-conjugated α-bungarotoxin to label nicotinic acetylcholine receptors (nAChRs; yellow) and labeled with fluorescent secondary antibodies.

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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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Description

Sulfatides are endogenous sulfoglycolipids with various biological activities in the central and peripheral nervous systems, pancreas, and immune system.¹ They are produced from the combination of ceramide and UDP-galactose in the endoplasmic reticulum followed by sulfation in the Golgi apparatus. The ceramide portion contains variable fatty acid chain lengths, which are tissue- and pathology-dependent. Sulfatides are primarily found in the myelin sheath of oligodendrocytes and Schwann cells, with smaller chain lengths predominant during development and longer chain lengths predominant in mature cells.² They accumulate in the lysosomes of patients with metachromatic leukodystrophy, a disorder characterized by arylsulfatase A deficiency.^{1,3} Sulfatides are also located in pancreatic β -cells and inhibit insulin release from isolated rat pancreatic islet cells, suggesting a potential role in diabetes.⁴ Sulfatides can induce inflammation in glia *in vitro* and certain sulfatides, such as C24:1 3'-sulfo-galactosylceramide, can induce an immune response *in vitro* in mouse splenocytes.^{5,6} They also inhibit influenza A virus infection *in vitro*.⁷ Brain levels of sulfatides are decreased in patients with preclinical Alzheimer's disease, and autoantibodies against sulfatide have been found in cerebrospinal fluid (CSF) of patients with multiple sclerosis.^{8,9} Intratumoral levels of sulfatide are positively correlated with increased tumor stage in patients with ovarian cancer.¹⁰ Cayman's Sulfatide Recombinant Monoclonal Antibody (Clone GAMEG3) can be used for ELISA and immunofluorescence (IF) applications.

References

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