



# SZABO SCANDIC

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# PRODUCT INFORMATION

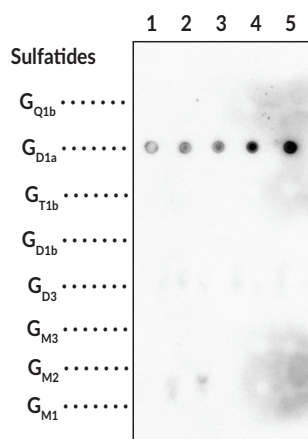


## Ganglioside G<sub>D1a</sub> Monoclonal Antibody (Clone TBG3) Item No. 38296

### Overview and Properties

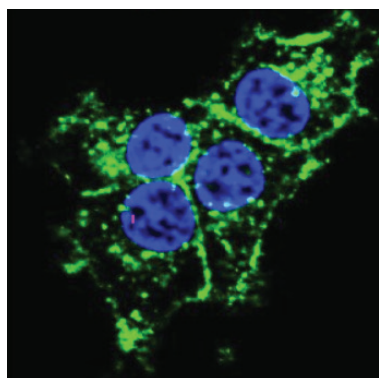
<b>Contents:</b>	This vial contains 100 µg of protein A-purified monoclonal antibody.
<b>Synonyms:</b>	Disialoganglioside G <sub>D1a</sub> , Ganglioside B <sub>1</sub> , Ganglioside G <sub>3</sub>
<b>Immunogen:</b>	G <sub>D1a</sub>
<b>Cross Reactivity:</b>	(+) Ganglioside G <sub>D1a</sub> ; (-) Ganglioside G <sub>D1b</sub> , Ganglioside G <sub>D3</sub> , Ganglioside G <sub>M1</sub> , Ganglioside G <sub>M2</sub> , Ganglioside G <sub>M3</sub> , Ganglioside G <sub>Q1b</sub> , Sulfatides
<b>Species Reactivity:</b>	(+) Species independent
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Clone:</b>	TBG3
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG3
<b>Applications:</b>	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: 200 ng

Dot blot against gangliosides using Ganglioside G<sub>D1a</sub> Monoclonal Antibody (Clone TBG3).<sup>1</sup>



PC12 cells labeled with Ganglioside G<sub>D1a</sub> Monoclonal Antibody (Clone TBG3) were incubated at 37°C for 30 min.<sup>1</sup>

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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# 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.<sup>2,3</sup> It is formed by the transfer of N-acetylneuraminic acid (Neu5Ac; Item No. 16091) to the precursor ganglioside  $G_{M1a}$  by CMP-N-acetylneuraminic acid- $\beta$ -galactosyltransferase 2 (ST3Gal-II).<sup>4</sup> 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-B<sub>5</sub>) to TLR2.<sup>5</sup> Ganglioside  $G_{D1a}$  also mediates polyomavirus entry into host cells.<sup>6</sup> 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.<sup>7</sup> Ganglioside  $G_{D1a}$  accumulates in the CNS of patients with galactosialidosis, a lysosomal storage disorder.<sup>8</sup> Cayman's Ganglioside  $G_{D1a}$  Monoclonal Antibody can be used for dot blot, ELISA, immunofluorescence (IF), and thin layer chromatography (TLC) immunostaining applications.

## References

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