



# SZABO SCANDIC

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## Produktinformation



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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

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# PRODUCT INFORMATION



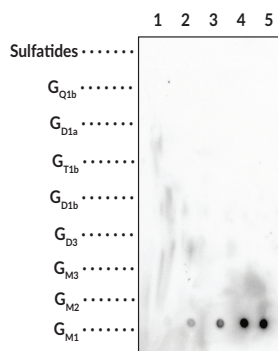
## Ganglioside G<sub>M1</sub> Monoclonal Antibody (Clone DG1)

Item No. 38289

### Overview and Properties

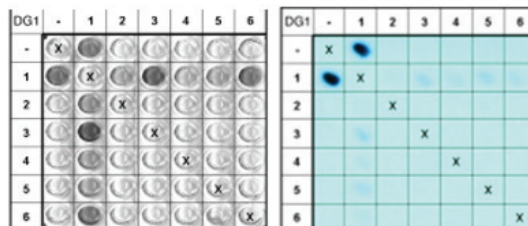
**Contents:** This vial contains 100 µg of protein G-purified monoclonal antibody.  
**Synonyms:** G<sub>M1</sub>, Monosialoganglioside G<sub>M1</sub>  
**Immunogen:** *C. jejuni* OH4384  
**Cross Reactivity:** (+) Ganglioside G<sub>M1</sub>; (-) Ganglioside G<sub>M2</sub>, Ganglioside G<sub>M3</sub>, Ganglioside G<sub>D1a</sub>, Ganglioside G<sub>D1b</sub>, Ganglioside G<sub>D3</sub>  
**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:** DG1  
**Host:** Mouse  
**Isotype:** IgG2b  
**Applications:** Dot blot, ELISA, and Immunohistochemistry (IHC); the recommended starting dilution for ELISA is 1:1,000-2,000, 1:500-1,000 for Dot blot, and 1:50 for IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images

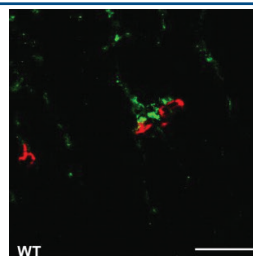


Lane 1: 10 ng  
 Lane 2: 25 ng  
 Lane 3: 50 ng  
 Lane 4: 100 ng  
 Lane 5: 150 ng

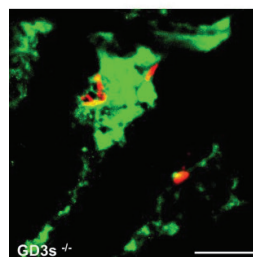
Dot blot against gangliosides using Ganglioside G<sub>M1</sub> Monoclonal Antibody.<sup>1</sup>



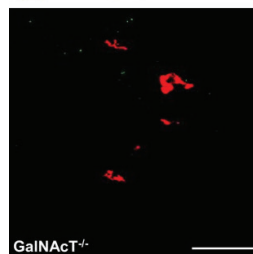
Reactivity of anti-G<sub>M1</sub> mAbs DG1 to ganglioside complexes containing G<sub>M1</sub> in solid phase.<sup>1</sup>



WT



GD3s<sup>-/-</sup>



GalNAcT<sup>-/-</sup>

DG1 topical immunostaining of frozen diaphragm sections from WT, GD3s<sup>-/-</sup>, and GalNAcT<sup>-/-</sup> mice.<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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**CAYMAN CHEMICAL**  
 1180 EAST ELLSWORTH RD  
 ANN ARBOR, MI 48108 · USA  
 PHONE: [800] 364-9897  
 [734] 971-3335  
 FAX: [734] 971-3640  
 CUSTSERV@CAYMANCHEM.COM  
 WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

Ganglioside  $G_{M1}$  is a monosialylated ganglioside and the prototypic ganglioside for those containing one sialic acid residue.<sup>2,3</sup> It is found in a large variety of cells, including immune cells and neurons, and is enriched in lipid rafts in the cell membrane.<sup>4</sup> It associates with growth factor receptors, including TrkA, TrkB, and the GDNF receptor complex containing Ret and GFR $\alpha$ , and is required for TrkA expression on the cell surface. Ganglioside  $G_{M1}$  interacts with other proteins to increase calcium influx, affecting various calcium-dependent processes, including inducing neuronal outgrowth during differentiation. Ganglioside  $G_{M1}$  acts as a receptor for cholera toxin, which binds to its oligosaccharide group, facilitating toxin cell entry into epithelial cells of the jejunum.<sup>5,6</sup> Similarly, it is bound by the heat-labile enterotoxin from *E. coli* in the pathogenesis of traveler's diarrhea.<sup>7</sup> Ganglioside  $G_{M1}$  sensitizes inactivated T cells to TNF- $\alpha$ -induced apoptosis and induces apoptosis of activated T cells even in the absence of TNF- $\alpha$ .<sup>8</sup> Ganglioside  $G_{M1}$  is found at higher levels on T cells isolated from patients with renal cell carcinoma (RCC) compared with T cells from patients without cancer. Levels of ganglioside  $G_{M1}$  are decreased in the substantia nigra pars compacta in postmortem brain tissues from patients with Parkinson's disease.<sup>4</sup> Ganglioside  $G_{M1}$  gangliosidosis, characterized by a deficiency in ganglioside  $G_{M1}$ - $\beta$ -galactosidase, the enzyme that degrades ganglioside  $G_{M1}$ , leads to accumulation of the gangliosides  $G_{M1}$  and  $G_{A1}$  in neurons and can be fatal in infants.<sup>2</sup> Cayman's Ganglioside  $G_{M1}$  Monoclonal Antibody can be used for dot blot, ELISA, and immunohistochemistry (IHC) applications.

## References

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CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM