Technical Data Sheet

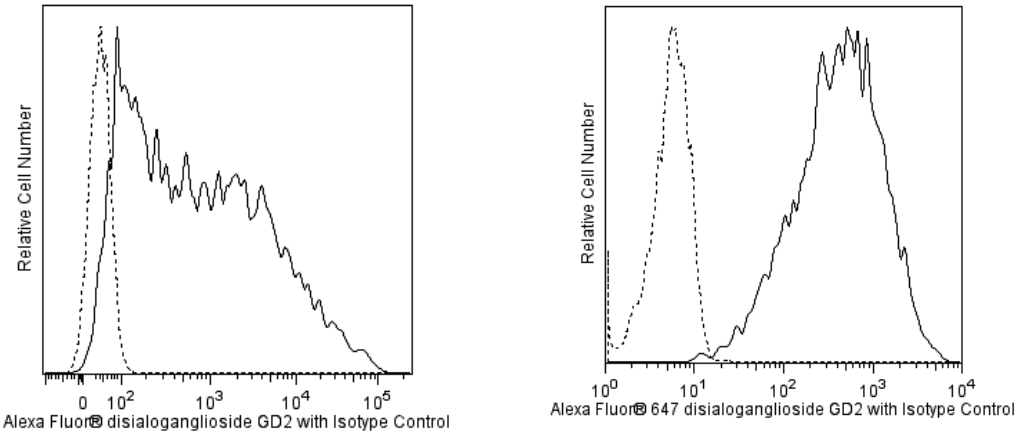
Alexa Fluor® 647 Mouse Anti-Human Disialoganglioside GD2

Product Information

Material Number:	**562096**
Size:	50 tests
Vol. per Test:	5 µl
Clone:	14.G2a
Immunogen:	LAN-1 human neuroblastoma cells
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

Gangliosides are sialic-acid bearing glycolipids that are expressed on the surface of all mammalian cells, and are likely involved in mediating cell-substratum interactions. They are important target antigens for antibody dependent cellular cytotoxicity (ADCC) of human melanoma and neuroblastoma cells. Human melanoma cells produce gangliosides, designated as GD2 and GD3 which are deposited in the subtratum-attached material, and may play a significant role in the melanoma metastatic phenotype. Clone 14.G2a specifically reacts with human and mouse GD2 ganglioside. LAN-1 human neuroblastoma cells were used as immunogen. Clone 14.G2a is an isotype switch variant selected from the parental IgG3-producing hybridoma 14.18 and has identical reactivity as the parental antibody. Clone 14.G2a is routinely tested by flow cytometry using M21 human melanoma cells.



Flow cytometric analysis of human disialoganglioside GD2 expression on human mesenchymal stem cells (MSCs) or M21 cell lines. *Human mesenchymal stem cells (Lonza, Cat. No. PT-2501, left panel) or M21 cells (right panel) were stained with Alexa Fluor® 647 Mouse Anti-Human disialoganglioside GD2 (Cat. No. 562096; solid line histogram) or with an Alexa Fluor® 647 Mouse IgG2a, κ Isotype Control (Cat. No. 557715; dashed line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometry System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
557715	Alexa Fluor® 647 Mouse IgG2a, κ Isotype Control	100 tests	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. An isotype control should be used at the same concentration as the antibody of interest.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Cheresh DA, Klier FG. Disialoganglioside GD2 distributes preferentially into substrate-associated microprocesses on human melanoma cells during their attachment to fibronectin. *J Cell Biol.* 1986; 102(5):1887-1897. (Biology)

Cheresh DA, Pierschbacher MD, Herzig MA, Mujoo K. Disialogangliosides GD2 and GD3 are involved in the attachment of human melanoma and neuroblastoma cells to extracellular matrix proteins. *J Cell Biol.* 1986; 102(3):688-696. (Biology)

Cheresh DA, Rosenberg J, Mujoo K, Hirschowitz L, Reisfeld RA. Biosynthesis and expression of the disialoganglioside GD2, a relevant target antigen on small cell lung carcinoma for monoclonal antibody-mediated cytolysis. *Cancer Res.* 1986; 46(10):5112-5118. (Clone-specific: Immunofluorescence, Immunohistochemistry)

Frost JD, Hank JA, Reaman GH, et al. A phase I/IB trial of murine monoclonal anti-GD2 antibody 14.G2a plus interleukin-2 in children with refractory neuroblastoma: a report of the Children's Cancer Group. *Cancer.* 1997; 80(2):317-333. (Clone-specific: Cytotoxicity)

Hakomori S. Tumor-associated carbohydrate antigens. *Annu Rev Immunol.* 1984; 2:103-126. (Methodology)

Lode HN, Reisfeld RA, Handgretinger R, Nicolaou KC, Gaedicke G, Wrasidlo W. Targeted therapy with a novel enediyene antibiotic calicheamicin theta(I)1 effectively suppresses growth and dissemination of liver metastases in a syngeneic model of murine neuroblastoma. *Cancer Res.* 1998; 58(14):2925-2928. (Clone-specific: Flow cytometry)

Mujoo K, Cheresh DA, Yang HM, Reisfeld RA. Disialoganglioside GD2 on human neuroblastoma cells: target antigen for monoclonal antibody-mediated cytolysis and suppression of tumor growth. *Cancer Res.* 1987; 47(4):1098-1104. (Clone-specific: Cytotoxicity, Inhibition)

Mujoo K, Kipps TJ, Yang HM, et al. Functional properties and effect on growth suppression of human neuroblastoma tumors by isotype switch variants of monoclonal antiganglioside GD2 antibody 14.18. *Cancer Res.* 1989; 49(11):2857-2861. (Clone-specific: Cytotoxicity)

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