

Technical Data Sheet

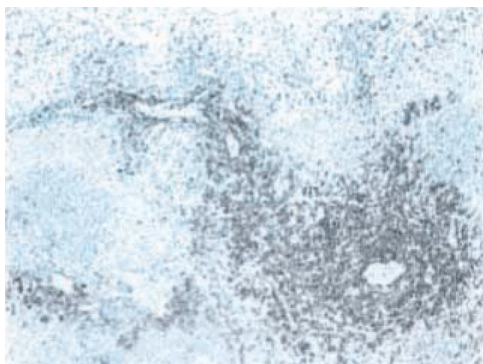
Purified Mouse Anti-Rat CD3

Product Information

Material Number:	550295
Size:	1.0 ml
Concentration:	31.25 µg/ml
Clone:	G4.18
Immunogen:	PHA-stimulated rat lymph node and spleen cells
Isotype:	Mouse (BALB/c) IgG3, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The G4.18 antibody reacts with the T-cell receptor-associated CD3 cell-surface antigen found on thymocytes, peripheral T lymphocytes, and dendritic epidermal T cells. It has been reported that CD3 expression is down-regulated within 24 hours in concanavalin A-stimulated rat T cells, and soluble mAb inhibits the allogeneic mixed-lymphocyte proliferative response and cell-mediated cytotoxicity to allogeneic target cells. In vivo treatment with G4.18 mAb prevents cardiac and skin allograft rejection, resulting in donor-specific tolerance. Pre-incubation of splenocytes with the alternate anti-rat CD3 monoclonal antibody, 1F4 (Cat. No. 556970), blocks staining with mAb G4.18.



Immunohistochemical staining of T lymphocytes. The frozen section of normal rat spleen was reacted with G4.18 mAb. T lymphocytes in the periarteriolar sheath, are identified by the brown labeling of their cell surface membrane.

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunohistochemistry-zinc-fixed	Tested During Development
Immunoprecipitation	Reported
Stimulation	Reported
Inhibition	Reported
Cytotoxicity	Reported

Recommended Assay Procedure:

Immunohistochemistry: The G4.18 antibody is recommended to test for immunohistochemical staining of acetone-fixed frozen sections and paraffin sections. Tissue tested was rat spleen. The antibody stains T lymphocytes. The isotype control recommended for use with this antibody is purified mouse IgG3 (Cat. No. 550341). For optimal indirect immunohistochemical staining, the G4.18 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with biotinylated anti-mouse IgG3 (Cat. No. 553401) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). A detailed protocol of the immunohistochemical procedure can be found at <http://www.bdbiosciences.com/support/resources>

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
550341	Purified Mouse IgG3, κ Isotype Control	1.0 ml	J606
553401	Biotin Rat Anti-Mouse IgG3	0.5 mg	R40-82
550946	Streptavidin HRP	50 ml	(none)
551011	Anti-Mouse Ig HRP Detection Kit	200 tests	(none)
550880	DAB Substrate Kit	500 tests	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

References

Naper C, Vaage JT, Lambricht D, et al. Alloreactive natural killer cells in the rat: complex genetics of major histocompatibility complex control. *Eur J Immunol.* 1995; 25(5):1249-1256. (Clone-specific: Cytotoxicity)

Nelson DJ, McMenamin C, McWilliam AS, Brennan M, Holt PG. Development of the airway intraepithelial dendritic cell network in the rat from class II major histocompatibility (Ia)-negative precursors: differential regulation of Ia expression at different levels of the respiratory tract. *J Exp Med.* 1994; 179(1):203-212. (Clone-specific: Immunohistochemistry)

Nicolls MR, Aversa GG, Pearce NW, et al. Induction of long-term specific tolerance to allografts in rats by therapy with an anti-CD3-like monoclonal antibody. *Transplantation* . 1993; 55(3):459-468. (Immunogen: Cytotoxicity, Flow cytometry, Immunohistochemistry, Immunoprecipitation, Inhibition, Stimulation)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

