

Technical Data Sheet

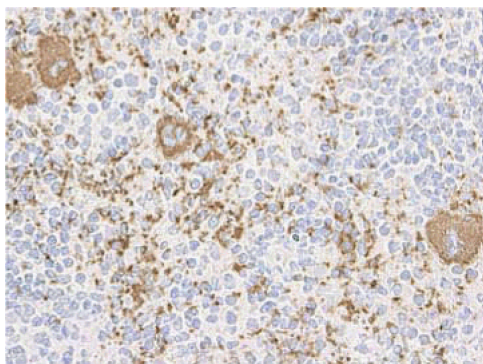
Purified Hamster Anti-Mouse CD61

Product Information

Material Number:	550541
Alternate Name:	Integrin $\beta 3$ chain
Size:	1.0 ml
Concentration:	250 μ g/ml
Clone:	2C9.G2
Immunogen:	Mouse T-cell Hybridoma 2B4 Vitronectin Receptor
Isotype:	Armenian Hamster IgG1, κ
Reactivity:	QC Testing: Mouse Tested in Development: Rat
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and $\leq 0.09\%$ sodium azide.

Description

The 2C9.G2 antibody reacts with the integrin $\beta 3$ chain (CD61), which associates with the integrin αv chain (CD51) to form the vitronectin receptor and with the αIIb chain (CD41) to form the $gPIIb/IIIa$ complex. Both receptors mediate adhesion to fibronectin, fibrinogen, vitronectin, thrombospondin, and von Willebrand factor. Leukocyte-endothelial adhesion is also mediated by the binding of $\alpha v\beta 3$ integrin or vitronectin receptor to CD31 (PECAM-1). In addition, interaction of the $\alpha v\beta 3$ integrin with its ligands regulates the L-type Ca^{2+} channel in vascular smooth muscle cells, possibly mediating vasodilatory responses to injury. Soluble and insoluble 2C9.G2 mAb mimics the effect of the natural ligands in smooth muscle cells from rat cremaster arterioles. Furthermore, osteopontin, also named Eta-1, is a cytokine that binds to $\alpha v\beta 3$. CD61 is expressed on platelets, activated T lymphocytes, polymorphonuclear granulocytes, and blastocysts. Cross-reactivity of mAb 2C9.G2 to rat mast cells and platelets has been observed by flow cytometric analysis. mAb 2C9.G2 has been demonstrated to block binding of rat and mouse cells to fibronectin.



Immunohistochemical staining of CD61 positive cells.
Frozen sections of normal mouse spleen were reacted with the anti-CD61 antibody. Cells positive for CD61 can be identified by the brown labeling of their cell membranes. Amplification 20X.

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-paraffin	Not Recommended

Recommended Assay Procedure:

Immunohistochemistry: The 2C9.G2 antibody specific for mouse CD61 is recommended to test for immunohistochemical staining of acetone-fixed frozen sections. Tissues tested were mouse spleen and thymus. The antibody stains platelets activated T lymphocytes and polymorphonuclear granulocytes. The isotype control recommended for use with this antibody is purified hamster IgG (Cat. No. 550344). For optimal indirect immunohistochemical staining, the 2C9.G2 antibody should be titrated (1-10 to 1-50 dilution and visualized via a three-step staining procedure in combination with anti-hamster IgG cocktail (Cat. No. 550335) 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 is available at our website, <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
550344	Purified Hamster IgG1, κ Isotype Control	1.0 ml	A19-3
550335	Biotin Mouse Anti-Hamster IgG Cocktail	1.0 ml	G94-56
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)
559148	Antibody Diluent for IHC	125 ml	(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. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
5. An isotype control should be used at the same concentration as the antibody of interest.
6. 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.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Ashkar S, Weber GF, Panoutsakopoulou V, et al. Eta-1 (osteopontin): an early component of type-1 (cell-mediated) immunity. *Science*. 2000; 287(5454):860-864. (Clone-specific: Blocking)

Frieser M, Hallmann R, Johansson S, Vestweber D, Goodman SL, Sorokin L. Mouse polymorphonuclear granulocyte binding to extracellular matrix molecules involves beta 1 integrins. *Eur J Immunol*. 1996; 26(12):3127-3136. (Biology)

Kieffer N, Phillips DR. Platelet membrane glycoproteins: functions in cellular interactions. *Annu Rev Cell Biol*. 1990; 6:329-357. (Biology)

Moulder K, Roberts K, Shevach EM, Coligan JE. The mouse vitronectin receptor is a T cell activation antigen. *J Exp Med*. 1991; 173(2):343-347. (Biology)

Piali L, Hammel P, Uhrek C, et al. CD31/PECAM-1 is a ligand for alpha v beta 3 integrin involved in adhesion of leukocytes to endothelium. *J Cell Biol*. 1995; 130(2):451-460. (Clone-specific: Blocking)

Schultz JF, Armand DR. Beta 1- and beta 3-class integrins mediate fibronectin binding activity at the surface of developing mouse peri-implantation blastocysts. Regulation by ligand-induced mobilization of stored receptor. *J Biol Chem*. 1995; 270(19):11522-11531. (Clone-specific: Blocking)

Wu X, Mogford JE, Platts SH, Davis GE, Meininger GA, Davis MJ. Modulation of calcium current in arteriolar smooth muscle by alpha v beta 3 and alpha 5 beta 1 integrin ligands. *J Cell Biol*. 1998; 143(1):241-252. (Biology)

Yasuda M, Hasunuma Y, Adachi H, et al. Expression and function of fibronectin binding integrins on rat mast cells. *Int Immunol*. 1995; 7(2):251-258. (Clone-specific: Blocking)

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

