

Technical Data Sheet

Biotin Rat Anti-Mouse CD16/CD32

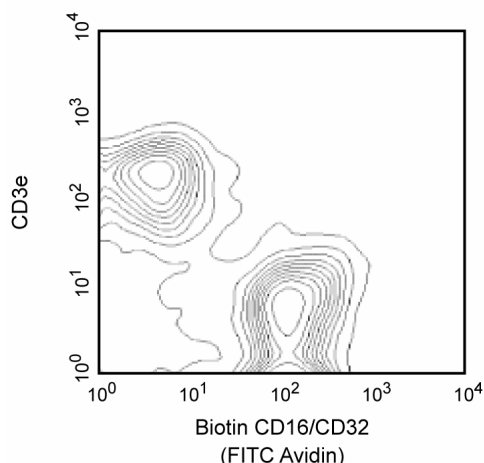
Product Information

Material Number:	553143
Alternate Name:	Fcγ III/II Receptor
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	2.4G2
Immunogen:	Mouse BALB/c Macrophage J774
Isotype:	Rat IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 2.4G2 antibody reacts specifically with a common nonpolymorphic epitope on the extracellular domains of the mouse FcγIII and FcγII receptors. It has also been reported to bind the FcγI receptor (CD64) via its Fc domain. 2.4G2 mAb blocks non-antigen-specific binding of immunoglobulins to the FcγIII and FcγII, and possibly FcγI, receptors *in vitro* and *in vivo*. CD16 and/or CD32 are expressed on natural killer cells, monocytes, macrophages, dendritic cells (at low levels), Kupffer cells, granulocytes, mast cells, B lymphocytes, immature thymocytes, and some activated mature T lymphocytes.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Two color analysis of the expression of CD16/CD32 on mouse spleen cells. C57BL/6 splenocytes were simultaneously stained with PE-conjugated anti-mouse CD3e mAb 145-2C11 (Cat. No. 553063/553064) and biotinylated 2.4G2 mAb, followed by Avidin-FITC (Cat. No. 554057). Flow cytometry was performed on a BD FACScan™ flow cytometry system.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested
----------------	------------------

BD Biosciences

www.bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit www.bdbiosciences.com/how_to_order/

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.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2007 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
553987	Biotin Rat IgG2b, κ Isotype Control	0.25 mg	A95-1
554057	Avidin FITC	0.5 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.

References

Araujo-Jorge T, Rivera MT, el Bouhidi A, Daeron M, Carlier Y. An Fc gamma RII-, Fc gamma RIII-specific monoclonal antibody (2.4G2) decreases acute Trypanosoma cruzi infection in mice. *Infect Immun.* 1993; 61(11):4925-4928.(Clone-specific)

Benhamou M, Bonnerot C, Fridman WH, Daeron M. Molecular heterogeneity of murine mast cell Fc gamma receptors. *J Immunol.* 1990; 144(8):3071-3077. (Clone-specific: Immunoprecipitation)

Jensen WA, Marschner S, Ott VL, Cambier JC. Fc gamma RIIB-mediated inhibition of T-cell receptor signal transduction involves the phosphorylation of SH2-containing inositol 5-phosphatase (SHIP), dephosphorylation of the linker of activated T-cells (LAT) and inhibition of calcium mobilization. *Biochem Soc Trans.* 2001; 29(6):840-846.(Clone-specific)

Katz HR, Arm JP, Benson AC, Austen KF. Maturation-related changes in the expression of Fc gamma RII and Fc gamma RIII on mouse mast cells derived in vitro and in vivo. *J Immunol.* 1990; 145(10):3412-3417.(Clone-specific: Immunoprecipitation)

Kurlander RJ, Ellison DM, Hall J. The blockade of Fc receptor-mediated clearance of immune complexes in vivo by a monoclonal antibody (2.4G2) directed against Fc receptors on murine leukocytes. *J Immunol.* 1984; 133(2):855-862.(Clone-specific: Blocking)

Lewis VA, Koch T, Plutner H, Mellman I. A complementary DNA clone for a macrophage-lymphocyte Fc receptor. *Nature.* 1986; 324(6095):372-375. (Clone-specific)

Mellman IS, Unkeless JC. Purification of a functional mouse Fc receptor through the use of a monoclonal antibody. *J Exp Med.* 1980; 152(4):1048-1069. (Clone-specific: Immunoprecipitation)

Perussia B, Tutt MM, Qiu WQ, et al. Murine natural killer cells express functional Fc gamma receptor II encoded by the Fc gamma R alpha gene. *J Exp Med.* 1989; 170(1):73-86.(Clone-specific)

Ravetch JV, Luster AD, Weinshank R, et al. Structural heterogeneity and functional domains of murine immunoglobulin G Fc receptors. *Science.* 1986; 234(4777):718-725.(Clone-specific)

Rodewald HR, Awad K, Moingeon P, et al. Fc gamma RII/III and CD2 expression mark distinct subpopulations of immature CD4-CD8- murine thymocytes: in vivo developmental kinetics and T cell receptor beta chain rearrangement status. *J Exp Med.* 1993; 177(4):1079-1092.(Clone-specific: Immunoprecipitation)

Rodewald HR, Moingeon P, Lucich JL, Dosiou C, Lopez P, Reinherz EL. A population of early fetal thymocytes expressing Fc gamma RII/III contains precursors of T lymphocytes and natural killer cells. *Cell.* 1992; 69(1):139-150.(Clone-specific: Immunoprecipitation)

Takezawa R, Watanabe Y, Akaike T. Direct evidence of macrophage differentiation from bone marrow cells in the liver: a possible origin of Kupffer cells. *J Biochem (Tokyo).* 1995; 118(6):1175-1183.(Clone-specific)

Titus JA, Finkelman FD, Stephany DA, Jones JF, Segal DM. Quantitative analysis of Fc gamma receptors on murine spleen cell populations by using dual parameter flow cytometry. *J Immunol.* 1984; 133(2):556-561.(Clone-specific)

Unkeless JC. Characterization of a monoclonal antibody directed against mouse macrophage and lymphocyte Fc receptors. *J Exp Med.* 1979; 150(3):580-596. (Immunogen)

Vremec D, Zorbas M, Scollay R, et al. The surface phenotype of dendritic cells purified from mouse thymus and spleen: investigation of the CD8 expression by a subpopulation of dendritic cells. *J Exp Med.* 1992; 176(1):47-58.(Clone-specific)