

Technical Data Sheet

V450 Rat Anti-Mouse CD16/CD32

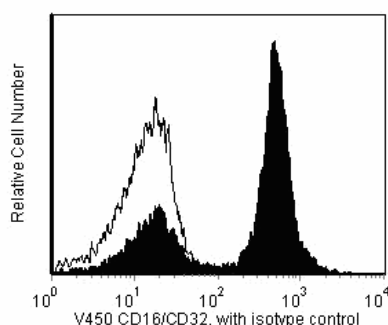
Product Information

Material Number:	560539
Alternate Name:	FcγRIII/FcγRII; Fcgr3/Fcgr2
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	2.4G2
Immunogen:	Mouse BALB/c Macrophage J774
Isotype:	Rat (SD) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤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.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



Analysis of CD16/CD32 on mouse splenocytes.
Splenocytes from BALB/c mice were stained with the BD Horizon™ V450 Rat Anti-Mouse CD16/CD32 antibody (shaded) or a BD Horizon™ V450 Rat IgG2b, κ isotype control (unshaded). Histograms were derived from gated events based on light scattering characteristics for CD3-splenocytes. Flow cytometry was performed on 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 with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
560457	V450 Rat IgG2b, κ Isotype Control	0.1 mg	A95-1

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- An isotype control should be used at the same concentration as the antibody of interest.

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3. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
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. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

- Araujo-Jorge T, Rivera MT, el Bouhddi 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. (Biology: Blocking)
- Benhamou M, Bonnerot C, Fridman WH, Daeron M. Molecular heterogeneity of murine mast cell Fc gamma receptors. *J Immunol*. 1990; 144(8):3071-3077. (Biology: Blocking)
- 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. (Biology: Blocking)
- Kaji K, Takeshita S, Miyake K, Takai T, Kudo A. Functional association of CD9 with the Fc gamma receptors in macrophages. *J Immunol*. 2001; 166(5):3256-3265. (Biology: (Co)-stimulation)
- 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. (Biology: 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. (Biology: Blocking)
- Latour S, Bonnerot C, Fridman WH, Daeron M. Induction of tumor necrosis factor-alpha production by mast cells via Fc gamma R. Role of the Fc gamma RIII gamma subunit. *J Immunol*. 1992; 149(6):2155-2162. (Biology: (Co)-stimulation)
- Lewis VA, Koch T, Plutner H, Mellman I. A complementary DNA clone for a macrophage-lymphocyte Fc receptor. *Nature*. 1986; 324(6095):372-375. (Biology)
- Maeda K, Burton GF, Padgett DA, et al. Murine follicular dendritic cells and low affinity Fc receptors for IgE (Fc epsilon RII). *J Immunol*. 1992; 148(8):2340-2347. (Biology: Immunohistochemistry)
- 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. (Biology: 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. (Biology)
- 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. (Biology)
- 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. (Biology: 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. (Biology: 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. (Biology)
- 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. (Biology)
- 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. (Biology)
- Witmer MD, Steinman RM. The anatomy of peripheral lymphoid organs with emphasis on accessory cells: light-microscopic immunocytochemical studies of mouse spleen, lymph node, and Peyer's patch. *Am J Anat*. 1984; 170(3):465-481. (Biology: Immunohistochemistry)

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