Technical Data Sheet

BV605 Rat Anti-Mouse CD16/CD32

Product Information

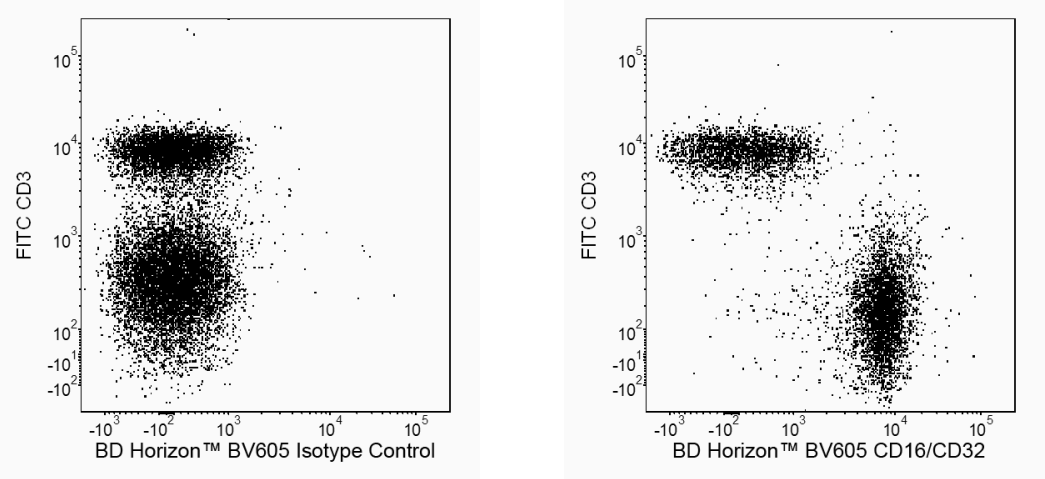
Material Number:	**563006**
Alternate Name:	FcγRIII/FcγRII; Fcgr3/Fcgr2
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	2.4G2
Immunogen:	Mouse BALB/c Macrophage J774
Isotype:	Rat (SD) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

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.

This antibody is conjugated to BD Horizon BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).



Two-color flow cytometric analysis of CD16/32 expression on mouse splenocytes. *Splenic leucocytes were stained simultaneously with FITC Hamster Anti-Mouse CD3e antibody (Cat. No. 553062/553061/561827) and with either BD Horizon™ BV605 Rat IgG2b, κ Isotype Control (Cat. No. 563145; Left Panel) or BD Horizon™ BV605 Rat Anti-Mouse CD16/CD32 antibody (Cat. No. 563006; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD16/CD32 (or Ig Isotype control staining) versus CD3e for gated events with the forward and side light-scatter characteristics of viable splenic leucocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.*

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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™ BV605 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV605 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
563145	BV605 Rat IgG2b, κ Isotype Control	50 µg	R35-38
553062	FITC Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
561827	FITC Hamster Anti-Mouse CD3e	25 µg	145-2C11
555899	Lysing Buffer	100 mL	(none)
563794	Brilliant Stain Buffer	5 mL	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from BD Horizon™ BV421 may be observed. Therefore, we recommend that individual compensation controls be performed for every BD Horizon™ BV605 conjugate.
9. CF™ is a trademark of Biotium, Inc.

References

Araujo-Jorge T, Rivera MT, el Bouhdidi 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: Flow cytometry, Functional assay, In vivo exacerbation)

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: Functional assay, In vivo exacerbation, Radioimmunoassay)

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. (Clone-specific: Flow cytometry, Functional assay, Stimulation)

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. (Clone-specific: Immunohistochemistry)

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

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: Flow cytometry)

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

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