

Technical Data Sheet

BV711 Rat Anti-Mouse CD16/CD32

Product Information

Material Number:	751691
Size:	50 µg
Clone:	Ab93 (also known as 93 or Antibody93)
Alternative Name:	Fcgr3/Fcgr2b; Fc gamma RIII/Fc gamma RIIB; FcγRIII/FcγRIIB
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat WI, also known as Wistar (outbred) IgG2a, λ
Immunogen:	Mouse Pre-B cells
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The Ab93 monoclonal antibody (aka, Antibody93) specifically recognizes a common epitope on the extracellular domains of mouse CD16 (Fc gamma RIII/FcγRIII encoded by Fcgr3) and CD32 (Fc gamma RIIB/FcγRIIB encoded by Fcgr2b). Therefore, Ab93 is referred to as an Anti-CD16/32 or Anti-FcγRII/III antibody. CD16 is variably expressed on neutrophils, macrophages, and natural killer (NK) cells whereas CD32 is expressed on B cells, monocytes, granulocytes, platelets and endothelial cells. CD16 and CD32 serve as low affinity receptors for IgG Fc constant regions and are involved in regulating various cellular functions including antibody-dependent cellular toxicity (ADCC), phagocytosis, effector cell degranulation, and B cell proliferation. In addition to identifying CD16- or CD32-positive cells, the Ab93 antibody is useful in phenotyping studies for blocking nonspecific staining due to Fc receptor-mediated binding of other antibodies. Ab93 is also useful in functional studies due to its Fc receptor blocking capability or by its capacity to crosslink Fc receptors leading to signal transduction that triggers cellular responses. Ab93 (Rat IgG2a, λ) and clone 2.4G2 (Rat IgG2b, κ), another mouse CD16/32-specific antibody, reportedly have similar specificities. The differences in the Ig heavy chain or Ig light chain isotypes of these CD16/32-specific antibodies afford flexibility in the design of experimental model systems involving other antibodies.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

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 to the dye under optimum conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

Catalog Number	Name	Size	Clone
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
563047	BV711 Rat IgG2a, κ Isotype Control	50 μ g	R35-95
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
566349	Brilliant Stain Buffer	1000 Tests	
566385	Brilliant Stain Buffer Plus	1000 Tests	

Product Notices

1. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
2. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
10. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
11. Cy is a trademark of GE Healthcare.

References

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