Technical Data Sheet

BV605 Rat Anti-Mouse IgD

Product Information

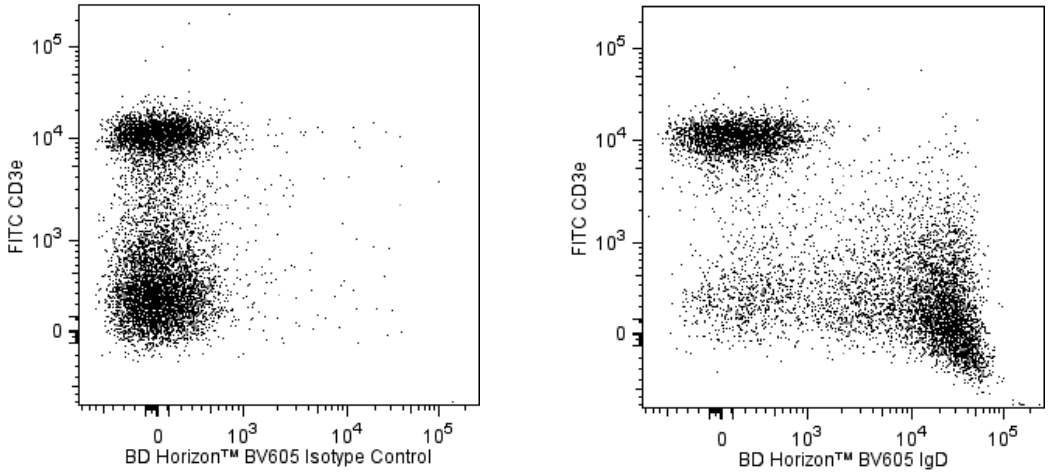
Material Number:	**563003**
Alternate Name:	IGHD; Igh-5; Immunoglobulin heavy chain 5; Ig delta chain C region
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	11-26c.2a
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 11-26c.2a monoclonal antibody specifically binds to mouse immunoglobulin D of all *Igh-C* haplotypes (e.g., IgDa, IgDb, IgDe), and it does not react with other immunoglobulin isotypes. Although 11-26c.2a mAb binds membrane IgD expressed on the splenic B-cell surface with high affinity, it does not induce proliferation of splenic B cells *in vitro*. *In vivo* injection of 11-26c.2a antibody does not have any effect on activation of mature B cells, as determined by MHC class II antigen expression.

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 mouse IgD expression on mouse splenocytes. *Splenic leucocytes from a BALB/c mouse were preincubated with Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with FITC Hamster Anti-Mouse CD3e antibody (Cat. No. 553062/553061/561827) and either BD Horizon™ BV605 Rat IgG2a, κ Isotype Control (Cat. No. 563144, Left Panel) or BD Horizon™ BV605 Rat Anti-Mouse IgD antibody (Cat. No. 563003, Right Panel). Two-color flow cytometric dot plots showing the correlated expression of IgD (or Ig isotype control staining) and CD3e were derived from gated events with the forward and side light scattering characteristics of viable splenocytes. 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)
563144	BV605 Rat IgG2a, κ Isotype Control	50 µg	R35-95
555899	Lysing Buffer	100 mL	(none)
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
561827	FITC Hamster Anti-Mouse CD3e	25 µg	145-2C11
553062	FITC Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2
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

BD Biosciences Pharmingen. Unpublished results. . (Clone-specific)

Campbell KS, Cambier JC. B lymphocyte antigen receptors (mIg) are non-covalently associated with a disulfide linked, inducibly phosphorylated glycoprotein complex. *EMBO J.* 1990; 9(2):441-448. (Clone-specific: Immunoprecipitation)

Hamilton AM, Lehuen A, Kearney JF. Immunofluorescence analysis of B-1 cell ontogeny in the mouse. *Int Immunol.* 1994; 6(3):355-361. (Clone-specific: Flow cytometry, Immunofluorescence)

Ishihara K, Wood WJ Jr, Wall R, et al. Multiple B29 containing complexes on murine B lymphocytes. Common and stage-restricted Ig-associated polypeptide chains. *J Immunol.* 1993; 150(6):2253-2262. (Clone-specific: Flow cytometry)

Nitschke L, Kosco MH, Kohler G, Lamers MC. Immunoglobulin D-deficient mice can mount normal immune responses to thymus-independent and -dependent antigens. *Proc Natl Acad Sci U S A.* 1993; 90(5):1887-1891. (Clone-specific: Flow cytometry)

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