

Technical Data Sheet

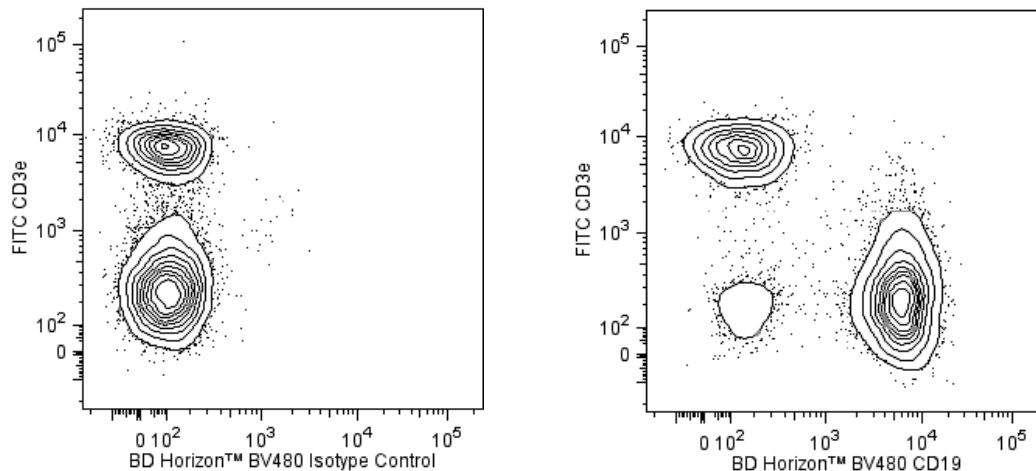
BV480 Rat Anti-Mouse CD19**Product Information**

Material Number:	566107
Alternate Name:	Cd19; CD19 antigen; B-lymphocyte antigen CD19
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	1D3
Immunogen:	Mouse CD19 Transfected Cell Line
Isotype:	Rat (LEW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

Description

The 1D3 antibody reacts with CD19, a B lymphocyte-lineage differentiation antigen. CD19, a 95-kDa transmembrane glycoprotein, is a member of the immunoglobulin superfamily and is expressed throughout B-lymphocyte development from the pro-B cell through the mature B-cell stages. Terminally differentiated plasma cells do not express CD19. On the surface of mature B cells, the CD19 molecule associates with CD21 (CR-2) and CD81 (TAPA-1), and this multimolecular complex synergizes with surface immunoglobulin to promote cellular activation. Studies with CD19-deficient mice have suggested that the level of CD19 expression affects the generation and maturation of B cells in the bone marrow and periphery. B-1 lineage B cells, also known as CD5+ B cells, are drastically reduced or absent in CD19-deficient mice. Increased levels of CD19 expression correlate with increased frequencies of peritoneal and splenic B-1 cells and reduced numbers of conventional B lymphocytes in the periphery. CD19 participates in B-lymphocyte development, B-cell activation, maturation of memory B cells and regulation of tolerance. CD19 has also been detected on peritoneal mast cells, co-localized with CD21/CD35, and it is proposed to play a role in complement-mediated mast-cell activation.

The antibody was conjugated to BD Horizon BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.



Two color flow cytometric analysis of CD19 expression on mouse splenocytes. Mouse splenic leucocytes were stained with FITC Hamster Anti-Mouse CD3e antibody (Cat. No. 553062/553061/561827) and either BD Horizon™ BV480 Rat IgG2a, κ Isotype Control (Cat. No. 565630; Left Plot) or BD Horizon BV480 Rat Anti-Mouse CD19 antibody (Cat. No. 566107/566167; Right Plot). The two-color flow cytometric contour plot showing the correlated expression of CD19 (or Ig Isotype control staining) versus CD3e was derived from gated events with the forward and side light-scatter characteristic of viable splenic leucocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

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566107 Rev. 1



Preparation and Storage

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

The antibody was conjugated with BD Horizon BV480 under optimum conditions, and unconjugated antibody and free BD Horizon BV480 were removed.

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

Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

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).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)
565630	BV480 Rat IgG2a, κ Isotype Control	50 µg	R35-95
566167	BV480 Rat Anti-Mouse CD19	25 µg	1D3
555899	Lysing Buffer	100 mL	(none)
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

Product Notices

1. BD Horizon Brilliant Violet 480 is covered by one or more of the following US patents: 8,575,303; 8,354,239.
2. 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.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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