

Technical Data Sheet

BUV563 Rat Anti-Mouse CD19

Product Information

Material Number:	749028
Size:	50 µg
Clone:	1D3
Alternative Name:	Cd19; CD19 antigen; B-lymphocyte antigen CD19
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat LEW, also known as Lewis IgG2a, κ
Immunogen:	Mouse CD19 Transfected Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	12478
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

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™ BUV563 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 which has an Ex Max of 348 nm and an acceptor dye. The tandem has an Em Max at 563 nm. BD Horizon BUV563 can be excited by the 355 nm ultraviolet laser. On instruments with a 561 nm Yellow-Green laser, the recommended bandpass filter is 585/15 nm with a 535 nm long pass to minimize laser light leakage. When BD Horizon BUV563 is used with an instrument that does not have a 561 nm laser, a 560/40 nm filter with a 535 nm long pass may be more optimal. Due to the excitation and emission characteristics of the acceptor dye, there may be spillover into the PE and PE-CF594 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

Preparation and Storage Section

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 BUV563 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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
612922	BUV563 Rat IgG2a, κ Isotype Ctrl R35-95 RUO	50 µg	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	
565804	Red Nucleic Acid Stain RUO	0.5 mL	

554656	Stain Buffer (FBS) RUO	500 mL
554657	Stain Buffer (BSA) RUO	500 mL
563794	Brilliant Stain Buffer RUO	100 Tests
555899	Lysing Buffer RUO	100 mL

Product Notices

1. This antibody was developed for use in flow cytometry.
2. 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.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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 wwwbdbiosciences.com/colors.
7. Please refer to wwwbdbiosciences.com/us/s/resources for technical protocols.
8. 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.

References

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