

Technical Data Sheet

BV605 Mouse Anti-Human CD19**Product Information**

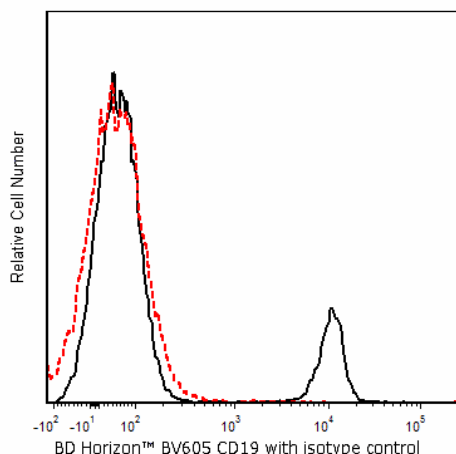
Material Number:	562654
Alternate Name:	B4; B-lymphocyte antigen CD19; Leu-12
Size:	25 Tests
Vol. per Test:	5 µl
Clone:	SJ25C1 (also known as SJ25-C1)
Immunogen:	Human NALM1 + NALM16 cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	II L17; III 073
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The SJ25C1 monoclonal antibody specifically binds to CD19, a B lymphocyte-lineage differentiation antigen. CD19, a 90-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.

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).



Flow cytometric analysis of CD19 expression on human peripheral blood lymphocytes. Human whole blood was stained with the BD Horizon™ BV605 Mouse Anti-Human CD19 antibody (Cat. No. 562653/562654; solid line histogram) or with BD Horizon™ BV605 Mouse IgG1, κ Isotype Control (Cat. No. 562652; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry 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
562652	BV605 Mouse IgG1, κ Isotype Control	50 µg	X40
554656	Stain Buffer (FBS)	500 mL	(none)
555899	Lysing Buffer	100 mL	(none)
562653	BV605 Mouse Anti-Human CD19	100 Tests	SJ25C1
563794	Brilliant Stain Buffer	5 mL	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. 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.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
10. CF™ is a trademark of Biotium, Inc.

References

Dörken B, Möller P, Pezzutto A, Schwartz-Albiez R, Moldenhauer G. B-cell antigens: CD19. In: Knapp W, Dörken B, Gilks WR, et al, ed. *Leukocyte Typing IV: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1989:34-36. (Clone-specific)

Loken MR, Shah VO, Dattilio KL, Civin CI. Flow cytometric analysis of human bone marrow. II. Normal B lymphocyte development. *Blood*. 1987; 70(5):1316-1324. (Biology)

Moldenhauer G, Dörken B, Schwartz R, Pezzutto A, Knops J, Hammerling GJ. Analysis of ten B lymphocyte-specific workshop monoclonal antibodies. In:

Reinherz EL, Haynes BF, Nadler LM, Bernstein ID, ed. *Leukocyte Typing II: Human B Lymphocytes*. New York: Springer-Verlag; 1986:61-67. (Clone-specific)

Nadler LM. B Cell/Leukemia Panel Workshop: summary and comments. In: Reinherz EL, Haynes BF, Nadler LM, Bernstein ID, ed. *Leukocyte Typing II: Human B Lymphocytes*. New York: Springer-Verlag; 1986:3-43. (Clone-specific: Flow cytometry)

Reichert T, DeBruyere M, Deneys V, et al. Lymphocyte subset reference ranges in adult Caucasians. *Clin Immunol Immunopathol*. 1991; 60(2):190-208. (Biology)

Tedder TF, Zhou LJ, Engel P. The CD19/CD21 signal transduction complex of B lymphocytes. *Immunol Today*. 1994; 15(9):437-442. (Biology)

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