

## Technical Data Sheet

## BUV395 Mouse Anti-Human CD19

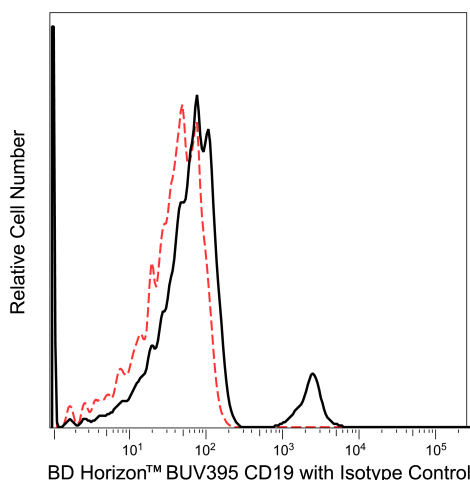
## Product Information

Material Number:	563551
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.

The antibody was conjugated to BD Horizon™ BUV395 which has been exclusively developed by BD Biosciences as an optimal dye for use on a 355 nm laser equipped instrument. With an Ex Max at 348 nm and an Em Max at 395 nm, this dye has virtually no spillover into any other detector. BD Horizon™ BUV395 can be excited with a 355 nm laser and detected with a 379/28 filter.



**Flow cytometric analysis of CD19 expression on human peripheral blood lymphocytes.** Human whole blood was stained with either BD Horizon™ BUV395 Mouse Anti-Human CD19 antibody (Cat. No. 563549/563551; solid line histogram) or with a BD Horizon™ BUV395 Mouse IgG1, κ Isotype Control (Cat. No. 563547; dashed line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

## 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™ BUV395 under optimum conditions, and unconjugated antibody and free BD Horizon™ BUV395 were removed.

## Application Notes

## Application

Flow cytometry

Routinely Tested

## BD Biosciences

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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
563547	BUV395 Mouse IgG1, k Isotype Control	50 µg	X40
563549	BUV395 Mouse Anti-Human CD19	100 tests	SJ25C1
349202	BD FACS™ Lysing Solution	100 ml	(none)

## Product Notices

1. An isotype control should be used at the same concentration as the antibody of interest.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. 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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
5. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
6. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100-µl experimental sample (a test).

## 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: Flow cytometry)

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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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