Technical Data Sheet

# BUV661 Mouse Anti-Human CD79b

## Product Information

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|---|---|
| Material Number: | 750602 |
| Size: | 50 µg |
| Clone: | CB3-1 |
| Alternative Name: | Ig-beta; IGB; B29 |
| Reactivity: | Human (Tested in Development) |
| Isotype: | Mouse IgG1, κ |
| Immunogen: | Purified CD79αβ from Ramos B Cell Line |
| Application: | Flow cytometry (Qualified) |
| Concentration: | 0.2 mg/ml |
| Workshop No.: | VI CD79.1 |
| Entrez Gene ID: | 974 |
| Storage Buffer: | Aqueous buffered solution containing ≤0.09% sodium azide. |
| Regulatory Status: | RUO |

## Description

Immunoglobulin (Ig) antigen receptors are composed of a non-covalently-associated complex of Ig and two other proteins, Igα and Igβ, which have been designated in the Fifth International Leukocyte Workshop as CD79a and CD79b respectively. The CB3-1 monoclonal antibody specifically binds to CD79b, which is expressed on surface Ig (sIg)-positive lymphocytes and B-cell lines but only in the cytoplasm of sIg-negative cells including most terminal deoxynucleotidyl transferase (TdT) positive early pre-B and all cytoplasmic µ positive pre-B cell lines. Antibodies to CD79b are helpful in delineating signal transduction pathways activated via antibody receptors during different stages of B-cell differentiation.

The antibody was conjugated to BD Horizon™ BUV661 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 661-nm. BD Horizon Brilliant BUV661 can be excited by the ultraviolet laser (355 nm) and detected with a 670/25 filter and a 630 nm LP. Due to cross laser excitation of this dye, there may be significant spillover into channels detecting APC-like emissions (eg, 670/25-nm filter).
Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV661 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV661 reagents (eg, CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone-specific compensation controls when using these reagents.

## 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 BUV661 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 |
|---|---|---|---|
| 554656 | Stain Buffer (FBS) | 500 mL | |
| 554657 | Stain Buffer (BSA) | 500 mL | |
| 563794 | Brilliant Stain Buffer | 100 Tests | |

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|---|---|---|---|
| 555899 | Lysing Buffer | 100 mL | |
| 612966 | BUV661 Mouse IgG1, κ Isotype Control | 50 µg | X40 |
| 349202 | Lysing Solution 10X Concentrate | 100 NA | |
| 564219 | Human BD Fc Block™ | 50 mg | |

## 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 www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.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.
9. BD Horizon Brilliant Ultraviolet 661 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.

## References

Nakamura T, Kubagawa H, Cooper MD. Heterogeneity of immunoglobulin-associated molecules on human B cells identified by monoclonal antibodies. Proc Natl Acad Sci U S A. 1992; 89(18):8522-8526. (Immunogen: Flow cytometry).
Nakamura T, Sekar MC, Kubagawa H, Cooper MD. Signal transduction in human B cells initiated via Ig beta ligation.. Int Immunol. 1993; 5(10):1309-15. (Clone-specific: Flow cytometry).
Nakamura T. CD79 Workshop Panel Report. In: Knapp W. W. Knapp .. et al., ed. Leucocyte typing IV : white cell differentiation antigens. Oxford New York: Oxford University Press; 1989; :180-182.
Sanchez M, Misulovin Z, Burkhardt AL. Signal transduction by immunoglobulin is mediated through Ig alpha and Ig beta. J Exp Med. 1993; 178(3):1049-1055. (Biology: Flow cytometry).
Schlossman SF. Stuart F. Schlossman .. et al., ed. Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993. Oxford: Oxford University Press; 1995; .

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