Technical Data Sheet

BV421 Rat Anti-Mouse CD122

Product Information

Material Number: 562960
Alternate Name: II2rb; IL-2Rbeta; IL-2Rβ; IL-15Rbeta; IL-2/15 Receptor-beta; IL-2/15Rbeta
Size: 50 µg
Concentration: 0.2 mg/ml
Clone: TM-β1
Immunogen: Mouse IL-2Rβ Transfected Cell Line
Isotype: Rat (SD) IgG2b, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The TM-β1 monoclonal antibody specifically recognizes the 90-100-kDa β chain shared by the IL-2 and IL-15 receptors (IL-2Rβ, CD122). In the periphery, CD122 is expressed on CD8+ T lymphocytes, NK cells, NK-T cells, dendritic epidermal T cells, subsets of intraepithelial lymphocytes, and macrophages. Small subsets of fetal and adult thymocytes constitutively express CD122. CD122+ cells in the bone marrow include committed NK-cell progenitors. IL-2Rβ expression is upregulated by IL-2. CD122 is a transmembrane glycoprotein of the hematopoietin receptor superfamily which can combine with CD132 (γc) alone or CD132 plus CD25 (IL-2Rα) to form intermediate or high-affinity IL-2 receptor complexes, respectively. The β chain of these complexes, CD122, is involved in signal transduction and immunoregulation. The TM-β1 antibody blocks high affinity binding of IL-2 or IL-15 to IL-2Rβ.

The antibody was conjugated to BD Horizon BV421 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue conjugates.

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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon BV421 were removed.

Two-color flow cytometric analysis of CD122 expression on mouse splenocytes. Splenic leukocytes from a BALB/c mouse were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with APC Rat Anti-Mouse CD49b antibody DX5 (Cat. No. 560628) and either BD Horizon™ BV421 Rat IgG2b, κ Isotype Control (Cat. No. 562603; Left Panel) or BD Horizon™ BV421 Rat Anti-Mouse CD122 (Cat. No. 562960/566301; Right Panel). The two-color flow cytometric dot plots show the correlated expression patterns of CD49b versus CD122 (or Ig Isotype control staining) for gated events with the forward and side light-scatter characteristics of viable splenic leukocytes. 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon BV421 were removed.
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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
7. BD Horizon Brilliant Violet 421 is covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,475,303; 8,354,239.

References