**Technical Data Sheet**

**FITC Rat Anti-Mouse CD23**

**Product Information**

- **Material Number:** 561772
- **Alternate Name:** FcεRII; Fc-epsilon-RII; Fcεr2a; Ly-42; Low-affinity IgE receptor; Fcεr2
- **Size:** 0.1 mg
- **Concentration:** 0.5 mg/ml
- **Clone:** B3B4
- **Immunogen:** FcεR isolated from the mouse B hybridoma line O1.2B2
- **Isotype:** Rat (LOU) IgG2a, κ
- **Reactivity:** Mouse
- **Storage Buffer:** Aqueous buffered solution containing ≤0.09% sodium azide.

**Description**

The B3B4 monoclonal antibody specifically binds to CD23, the low affinity IgE Fc receptor (FcεRII) expressed on mature resting conventional B lymphocytes, but not on B-1 cells (CD5+ B cells) or T lymphocytes. It does not react with high-affinity IgE receptors, as demonstrated on mouse mast cell lines. The regulation of CD23 surface expression on activated B cells appears to be complex, depending upon the mode of activation and the presence of cytokines. IgE synthesis is negatively regulated by CD23, and CD23 expression is upregulated on splenocytes in the presence of IgE. CD23 is also upregulated on follicular dendritic cells in the lymph nodes of immunized mice, and a subset of splenic dendritic cells expresses CD23. The B3B4 antibody abrogates antigen-specific IgE-dependent modulation of immune responses in normal mice. This monoclonal antibody also blocks IgE binding and eosinophil infiltration in the lung of immunized mice. Different in vivo results have been obtained when using the intact B3B4 antibody or the F(ab')2 fragments. B3B4 mAb does not cross-react with rat or human IgE Fc Receptor.

**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 FITC under optimum conditions, and unreacted FITC was removed.

**Application Notes**

**Application**

| Flow cytometry | Routinely Tested |

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## Suggested Companion Products

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<td>FITC Rat IgG2a, κ Isotype Control</td>
<td>0.25 mg</td>
<td>R35-95</td>
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<td>PE Anti-Mouse IgM[a]</td>
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<td>B3B4</td>
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<td>Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)</td>
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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. 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.

## References

Conrad DH, Waldschmidt TJ, Lee WT, et al. Effect of B cell stimulatory factor-1 (interleukin 4) on Fc epsilon and Fc gamma receptor expression on murine B lymphocytes and B cell lines. *J Immunol.* 1987; 139(7):2290-2296. (Biology)


Kisselgof AB, Oettgen HC. The expression of murine B cell CD23, in vivo, is regulated by its ligand, IgE. *Int Immunol.* 1998; 10(8):1377-1384. (Biology)


Rabin E, Cong YZ, Wortis HH. Loss of CD23 is a consequence of B-cell activation. Implications for the analysis of B-cell lineages. *Ann N Y Acad Sci.* 1992; 651:130-142. (Biology)


