FITC Hamster Anti-Mouse CD3e

Product Information

Material Number: 553061
Alternate Name: CD3; CD3 epsilon; Cd3e; CD3ε; T3e
Size: 0.1 mg
Concentration: 0.5 mg/ml
Clone: 145-2C11
Immunogen: H-2Kb specific cytotoxic T lymphocyte clone BM10-37
Isotype: Armenian Hamster IgG1, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The 145-2C11 monoclonal antibody specifically binds to the 25-kDa ε chain of the T-cell receptor-associated CD3 complex that is expressed on thymocytes, mature T lymphocytes, and NK-T cells. The cytoplasmic domain of CD3ε participates in the signal transduction events that activate several cellular biochemical pathways as a result of antigen recognition. Soluble 145-2C11 antibody can activate either unprimed (naïve) or primed (memory/preactivated) T cells in vivo or in vitro, in the presence of Fc receptor-bearing accessory cells. In contrast, plate-bound 145-2C11 can activate T cells in the absence of accessory cells. Soluble 145-2C11 antibody has been reported to induce re-directed lysis of Fc receptor-bearing target cells by CTL clones and can also block lysis of specific target cells by antigen-specific CTL's. Under some conditions, T-cell activation by 145-2C11 antibody has been reported to result in apoptotic cell death. The 145-2C11 antibody does not cross-react with rat leukocytes. Preincubation of thymus cell suspensions at 37°C for 2-4 hours prior to staining reportedly enhances the ability of anti-CD3ε and anti-αβ TCR mAbs to detect the T-cell receptor on immature thymocytes.

Flow cytometric analysis of CD3ε expression in spleen and thymus. C57BL/6 splenocytes were simultaneously stained with PE Rat Anti-Mouse CD4 (Cat. No. 553048), PE-Rat Anti-Mouse CD8a (Cat. No. 553032) and FITC Hamster Anti-Mouse CD3ε (Cat. No. 553061/553062/561827; bottom left panel). C57BL/6 thymocytes were also stained with FITC Hamster Anti-Mouse CD3ε (bottom right panel) or unstained (top right panel). Fluorescence contour plots and histograms were derived from gated events based on the forward and side light-scattering of viable splenocytes and thymocytes. Flow cytometry was performed on a BD FACScan™.

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.

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Application Notes

Application

Flow cytometry Routinely Tested
Fluorescence microscopy Reported

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<td>553971</td>
<td>FITC Hamster IgG1 x Isotype Control</td>
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<td>PE Rat Anti-Mouse CD8a</td>
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<td>554657</td>
<td>Stain Buffer (BSA)</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. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
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.

References