The 16A monoclonal antibody specifically recognizes an exon B-dependent epitope of CD45 lycoprotein, which is found at high density on peripheral B cells, T cytotoxic/suppressor cells, a subset of T helper cells, and most thymocytes, and at low density on macrophages and dendritic cells. CD45RB expression appears to decrease as T lymphocytes progress from naive to memory cells. In addition, subpopulations of CD4+ T cells which express high and low levels of CD45RB have different cytokine secretion profiles and mediate distinct immunological functions. CD25+ D4+ regulatory T (Treg) lymphocytes which control intestinal inflammation and autoimmunity express low levels of CD45RB. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family; its intracellular (COOH-terminal) region contains two PTP catalytic domains, and the extracellular region is highly variable due to alternative splicing of exons (designated A, B, and C, respectively) as well as differing levels of glycosylation. The CD45 isoforms detected in the mouse are cell type-, maturation-, and activation state-specific. The CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction.
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 to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application
Flow cytometry Routinely Tested
Immunofluorescence Tested During Development

Suggested Companion Products

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<thead>
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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<td>500 mL</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. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® 647 is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References