APC Mouse Anti-Human CD8

**Product Information**

- **Material Number:** 561421
- **Alternate Name:** CD8α, CD8A, CD8 alpha, Leu2, MAL, T8, p32
- **Size:** 50 Tests
- **Vol. per Test:** 5 µl
- **Clone:** RPA-T8
- **Immunogen:** Human CD8a
- **Isotype:** Mouse IgG1, κ
- **Reactivity:** QC Testing: Rhesus, Cynomolgus, Baboon
- **Workshop:** IV T171; V T-CD08.03; VI 6T-CD8.1, 6T-081
- **Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The RPA-T8 monoclonal antibody specifically binds to CD8 α (CD8α). CD8α is a type I transmembrane glycoprotein and a member of the immunoglobulin superfamily. CD8α is expressed by the majority of thymocytes, by subpopulations of αβ T cells and γδ T cells and by some NK cells. Cell surface CD8α is expressed either as a disulfide-linked homodimer (CD8αα) or as a heterodimer (CD8αβ) when disulfide-bonded to a CD8 beta chain (CD8β). CD8-positive αβ T cells coexpress both CD8αα homodimers and CD8αβ heterodimers whereas some γδ T cells and NK cells express CD8αα homodimers. CD8 plays important roles in T cell activation and selection. The extracellular IgSF domain of CD8αα binds to a non-polymorphic determinant on HLA class I molecules (α3 domain) and enables CD8 to function as a co-receptor with MHC class I-restricted TCR during T cell recognition of antigen. The cytoplasmic domain of CD8α associates with Lck, a Src family protein tyrosine kinase that is involved in intracellular signaling. The RPA-T8 and HIT8a monoclonal antibodies are not cross-blocking. This clone has been reported to react with a subset of peripheral blood lymphocytes, but not monocytes nor granulocytes, of baboon and both rhesus and cynomolgus macaque monkey. In general, a higher frequency of CD8+ and CD4+CD8+ lymphocytes are observed in non-human primates compared to normal human donors.

**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 APC under optimum conditions, and unconjugated antibody and free APC were removed.

**Application Notes**

<table>
<thead>
<tr>
<th>Application</th>
<th>Routinely Tested</th>
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<tr>
<td>Flow cytometry</td>
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**Flow cytometric analysis of CD8 expression on Rhesus macaque peripheral blood lymphocytes.** Rhesus macaque whole blood was stained with APC Mouse anti-Human CD8 antibody (Cat. No. 561421/561952/561953; solid line histogram) or with an APC Mouse IgG1, κ Isotype Control (Cat. No. 554681; dashed line histogram). The erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.
Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
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<td>554681</td>
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<td>MOPC-21</td>
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<td>Stain Buffer (BSA)</td>
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<td>349202</td>
<td>BD FACSTM Lysing Solution</td>
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<td>561952</td>
<td>APC Mouse Anti-Human CD8</td>
<td>25 Tests</td>
<td>RPA-T8</td>
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<tr>
<td>561953</td>
<td>APC Mouse Anti-Human CD8</td>
<td>500 Tests</td>
<td>RPA-T8</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
6. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References