

Technical Data Sheet

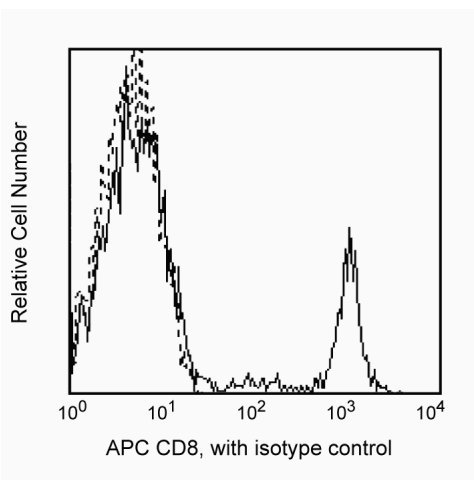
APC Mouse Anti-Human CD8

Product Information

| | |
|-------------------------|--|
| Material Number: | 555369 |
| Alternate Name: | CD8 α ; CD8A; CD8 alpha; Leu2; MAL; T8; p32 |
| Size: | 100 Tests |
| Vol. per Test: | 20 μ l |
| Clone: | RPA-T8 |
| Immunogen: | Human CD8a |
| Isotype: | Mouse IgG1, κ |
| Reactivity: | QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon |
| Workshop: | IV T171; V T-CD08.03; VI 6T-CD8.1, 6T-081 |
| Storage Buffer: | Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide. |

Description

The RPA-T8 monoclonal antibody specifically binds to CD8 alpha (CD8 α). CD8 α is a type I transmembrane glycoprotein and a member of the immunoglobulin superfamily. CD8 α is expressed by the majority of thymocytes, by subpopulations of $\alpha\beta$ T cells and $\gamma\delta$ T cells and by some NK cells. Cell surface CD8 α is expressed either as a disulfide-linked homodimer (CD8 $\alpha\alpha$) or as a heterodimer (CD8 $\alpha\beta$) when disulfide-bonded to a CD8 beta chain (CD8 β). CD8-positive $\alpha\beta$ T cells coexpress both CD8 $\alpha\alpha$ homodimers and CD8 $\alpha\beta$ heterodimers whereas some $\gamma\delta$ T cells and NK cells express CD8 $\alpha\alpha$ homodimers. CD8 plays important roles in T cell activation and selection. The extracellular IgSF domain of CD8 α binds to a non-polymorphic determinant on HLA class I molecules ($\alpha 3$ 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 CD8 α 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.



Flow cytometric analysis of CD8 α expression on human peripheral blood lymphocytes. Human whole blood was stained with APC Mouse Anti-Human CD8 (Cat. No. 555369/561953/561952/561421; solid line histogram) or with APC Mouse IgG1 κ Isotype Control (Cat. No. 555751; dashed line histogram). Erythrocytes were lysed with BD Pharm Lyse™ 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 carried out on a BD FACSCan™ 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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

BD Biosciences

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555369 Rev. 4



Suggested Companion Products

| <u>Catalog Number</u> | <u>Name</u> | <u>Size</u> | <u>Clone</u> |
|-----------------------|--|-------------|--------------|
| 555751 | APC Mouse IgG1, κ Isotype Control | 100 Tests | MOPC-21 |
| 554656 | Stain Buffer (FBS) | 500 mL | (none) |
| 554657 | Stain Buffer (BSA) | 500 mL | (none) |
| 349202 | BD FACST [™] Lysing Solution | 100 mL | (none) |
| 555899 | Lysing Buffer | 100 mL | (none) |
| 561953 | APC Mouse Anti-Human CD8 | 500 Tests | RPA-T8 |
| 561952 | APC Mouse Anti-Human CD8 | 25 Tests | RPA-T8 |
| 561421 | APC Mouse Anti-Human CD8 | 50 Tests | RPA-T8 |

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l 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.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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