

**PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody**  
Catalog # ATB10260**Specification****PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody - Product Information**

Application	FC
Isotype	Mouse IgG2a, kappa
Concentration	5 uL (0.25 ug)/test
Reactivity	Human
Formulation	10 mM NaH <sub>2</sub> PO <sub>4</sub> , 150 mM NaCl, 0.09% Na <sub>3</sub> N, 0.1% gelatin, pH7.2
Host	Mouse

**PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody - Additional Information**

Gene ID	916
Gene Name	CD3E
Alternative Name(s)	
Leu-4, T3	

**Format**  
PerCP-Cy5.5**Preparation**

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation. It is recommended to store the product undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.

**Application Notes**

This antibody preparation has been pre-titrated and quality-tested for flow cytometry using an appropriate cell type. The antibody has been diluted for use at 5 uL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 uL. The number of cells within a sample should be determined empirically, but typically ranges between 1x10<sup>5</sup> to 1x10<sup>8</sup> cells.

**Storage Conditions**

2-8°C protected from light

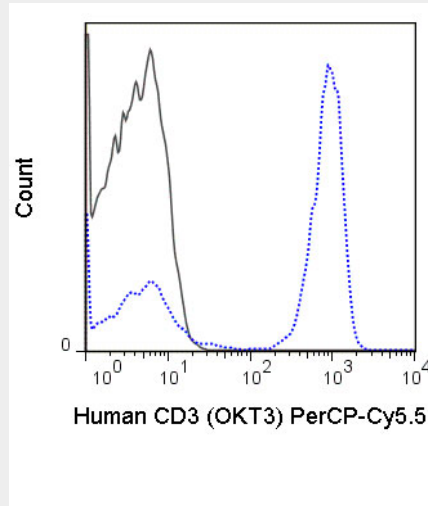
**PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

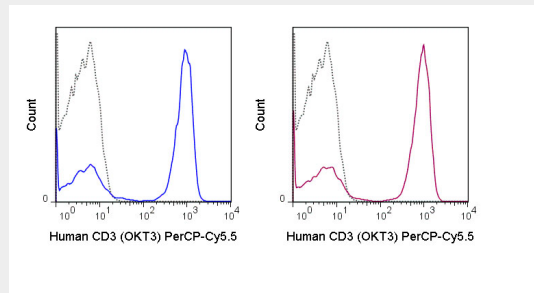
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody - Images



Human peripheral blood lymphocytes were stained with 5 uL (0.25 ug) PerCP-Cy5.5 Anti-Human CD3 (ATB10260) (solid line) or 0.25 ug PerCP-Cy5.5 Mouse IgG2a isotype control.



Human peripheral blood lymphocytes were stained with 5 uL (0.25 ug) PerCP-Cy5.5 Anti-Human CD3 (OKT3) manufactured by Tonbo Biosciences (left panel) or eBioscience (right panel).

### PerCP-Cy5.5 Anti-Human CD3 (OKT3) Antibody - Background

The OKT3 antibody is specific for human CD3e, also known as CD3 epsilon, a 20 kDa subunit of the T cell receptor complex along with CD3 gamma and CD3 delta. These integral membrane protein chains assemble with additional chains of the T cell receptor (TCR), as well as CD3 zeta chain, to form the T cell receptor - CD3 complex. Together with co-receptors CD4 or CD8, the complex serves to recognize antigens bound to MHC molecules on antigen-presenting cells. These interactions promote T cell receptor signaling (T cell activation), inducing a number of cellular responses including proliferation, differentiation, production of cytokines or activation-induced cell death. CD3 is differentially expressed during thymocyte-to-T cell development and on all mature T cells. The OKT3 antibody is a widely used phenotypic marker for human T cells. In addition, as the CD3e subunit of the TCR complex contains intracellular signaling domains, binding of OKT3 antibody to CD3e can induce cell activation. A recent publication of the crystal structure of a CD3e-mitogenic antibody complex provides further insight as to the action of commonly used agonist antibodies, as well as specific epitope-binding data for the widely used human CD3 antibodies OKT3 and UCHT1 (Fernandes, R.A. et al. 2012. *J. Biol. Chem.* 287: 13324-13335). OKT3 has also been shown to be cross-reactive with Chimpanzee CD3 and has been used for in vitro activation of T cells in this species.