



**Source**

APC-Labeled Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3) is produced via conjugation of APC to Anti-Human CD3 Antibody, Mouse IgG2a (OKT3) under optimal conditions with a new generation site-specific technology under Star Staining labeling platform.

**Application**

Flow Cytometry (Detection the expression of CD3 on Human cells).

**Clone**

OKT3

**Species**

Mouse

**Isotype**

Mouse IgG2a/kappa

**Specificity**

This product is a specific antibody specifically reacts with CD3 epsilon protein.

**Reactivity**

Human

**Immunogen**

Purified Human CD3ε Protein.

**Conjugate**

APC

Excitation Wavelength: 640 nm

Emission Wavelength: 661 nm

**Isotype Control**

The Isotype control is sold separately and you can search for Cat. No. [DNP-AFM487](#) for product information.

**Recommended Dilution**

1:50

**Formulation**

Lyophilized from 0.22 μm filtered solution in PBS, 0.03% Proclin 300, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

**Storage**

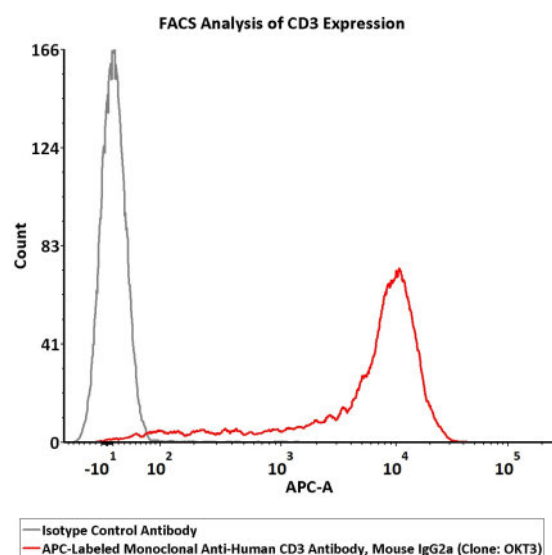
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please protect from light and avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months after reconstitution;
- 2-8°C for 12 months after reconstitution.

**Bioactivity-FACS**



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Flow cytometric analysis of Jurkat cells staining with APC-Labeled Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3) (Cat. No. CDE-AHFP1) at 1:50 dilution (2 $\mu$ L of the antibody stock solution corresponds to labeling of 1e6 cells in a final volume of 100  $\mu$ L) , compared with isotype control antibody. APC signal was used to evaluate the binding activity (QC tested).

## Background

CD3 $\epsilon$  molecule, epsilon is also known as CD3E, is a T-cell surface single-pass type I membrane glycoprotein. CD3E contains 1 Ig-like (immunoglobulin-like) domain and 1 ITAM domain. CD3E, together with CD3-gamma, CD3-delta and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11. The epsilon polypeptide plays an essential role in T-cell development. CD3E plays an essential role in T-cell development, and defects in CD3E gene cause severe immunodeficiency. CD3E gene has also been linked to a susceptibility to type I diabetes in women. CD3E has been shown to interact with TOP2B, CD3EAP and NCK2.

## Clinical and Translational Updates

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