# Anti-Human CD3-FITC/CD8a-PE/CD45-PerCP/CD4-APC Cocktail

**Catalog Number:** **E-AB-FC0022**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

## Description

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|---|---|
| **Reactivity** | Human |
| **Clone No.** | OKT-3,SK1,HI30,SK3 |
| **Conjugation** | FITC;PE;PerCP;APC |
| **Conjugation Information** | FITC is designed to be excited by the Blue laser (488 nm) and detected using an optical filter centered near 530 nm (e.g., a 525/40 nm bandpass filter). PE is designed to be excited by the Blue (488 nm), Green (532 nm) and Yellow-Green (561 nm) lasers and detected using an optical filter centered near 575 nm (e.g., a 585/42 nm bandpass filter). PerCP is designed to be excited by the blue laser (488 nm) and detected using an optical filter centered near 675 nm (e.g., a 690/50 nm bandpass filter). APC is designed to be excited by the Red (627-640 nm) laser and detected using an optical filter centered near 660 nm (e.g., a 660/20 nm bandpass filter). |
| **Storage Buffer** | Phosphate buffered solution, pH 7.2, containing 0.09% stabilizer. |

## Applications Recommended usage

**FCM**

1.1. For whole blood samples, add 5 μL Anti-Human CD3-FITC/CD8a-PE/CD45-PerCP/CD4-APC Cocktail to 100 μL anticoagulant-treated blood sample.

1.2. Mix and incubate the sample at 4°C in the dark for 30 min.

1.3. Remove red blood cells with RBC lysis solution following the manufacturer's instruction.

1.4. Wash the cell with cell staining buffer and discard the supernatant after centrifugation at 300 g for 5 min.

1.5. Resuspend the cells with 200 μL cell staining buffer and load the sample on flow cytometer for detection.

2.1. For other samples, 1× $10^6$ dissociated single cells are centrifuged at 300 g for 5 min with the supernatant discarded.

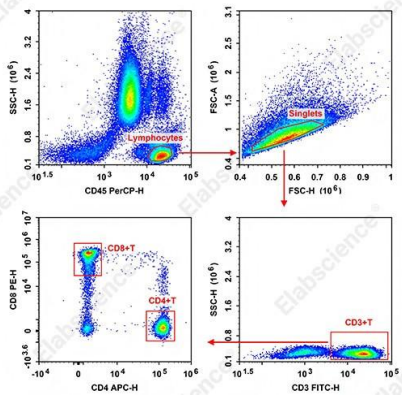
2.2. Resuspend the cells with 100 μL cell staining buffer and add 5 μL Anti-Human CD3-FITC/CD8a-PE/CD45-PerCP/CD4-APC Cocktail.

2.3. Mix and incubate the sample at 4°C in the dark for 30 min.

2.4. Add cell staining buffer to each tube, centrifuge at 300 g for 5 min and discard the supernatant.

2.5. Resuspend the cells with 200 μL cell staining buffer and load the sample on flow cytometer for detection

## Data



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Human peripheral blood lymphocytes are stained with Anti-Human CD3-FITC/CD8a-PE/CD45-PerCP/CD4-APC Cocktail.

## Preparation & Storage

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|---|---|
| **Storage** | Keep as concentrated solution.<br>This product can be stored at 2-8°C for 12 months. Please protected from prolonged exposure to light and do not freeze. |
| **Shipping** | The product is shipped with ice pack, upon receipt, store it immediately at the recommended temperature. |

## Antigen Information

**Background**

This product is a FCM antibody cocktail made up of FITC Anti-Human CD3 Antibody [ Clone: OKT-3] (Mouse IgG2a, κ), PE Anti-Human CD8a Antibody [Clone: SK1] (Mouse IgG1, κ), PerCP Anti-Human CD45 Antibody [Clone: HI30] (Mouse IgG1, κ) and APC Anti- Human CD4 Antibody [Clone: SK3] (Mouse IgG1, κ).

CD3 is a heterotetrameric protein consisting of a CD3γ, a CDδ and 2 CD3ε. It forms complex with TCR. OKT-3 recognize human CD3ε. Human CD3 is expressed on the surface of T cells and NKT cells. CD8 is mainly expressed on cytotoxic T cells and also some subpopulations of NK cells. CD8 forms dimer function. In most cells, CD8 is a heterodimer consisting of CD8a and CD8b, but in NK cells nearly all CD8 is homodimer of CD8a. CD8a can form co-receptor with MHC-I restricted TCR to promote T cell antigen recognition and activation.

CD45 is a single-chain type I transmembrane glycoprotein. Except for erythrocytes and platelets, CD45 is expressed on nearly all of the hematopoietic cells with high level. It is a common marker for blood leukocytes. CD45 is a receptor type protein tyrosine phophatase and plays essential roles in B cell and T cells signaling.

CD4 is also called Leu-3 or T4. It's a single-chain type I transmembrane glycoprotein, mainly expressed on the surface of T cells, and monocytes/macrophages. In T cells, CD4 forms complex with TCR/CD3 and play important roles in T cell immunity. The target of HIV is CD4+ T cells. Reduction of CD4+ T cells is the main reason of defected immunity after HIV infection.



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