

## Anti-Human CD45-FITC/CD3-PE/Cyanine5/CD4-PE/CD8-PE/Elab Fluor® 594 Cocktail

Catalog Number: E-AB-FC0029

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

### Description

Reactivity	Human
Clone No.	HI30/OKT-3/SK3/UCHT-4
Conjugation	FITC;PE;Cyanine5;PE;PE;Elab Fluor® 594
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/Cyanine 5.5 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 690 nm (e.g., a 690/50 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). PE/Elab Fluor® 594 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 620 nm (e.g., a 610/20 nm bandpass filter).
Storage Buffer	Phosphate buffered solution, pH 7.2, containing 0.09% stabilizer.

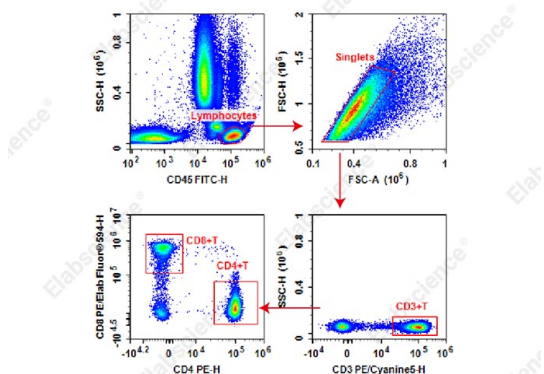
### Applications

### Recommended usage

#### FCM

Each lot of this antibody is quality control tested by flow cytometric analysis. **The amount of the reagent is suggested to be used 5 µL of antibody per test (million cells in 100 µL staining volume or per 100 µL of whole blood).** Please check your vial before the experiment. Since applications vary;the appropriate dilutions must be determined for individual use.

### Data



Human peripheral blood lymphocytes are stained with Anti-Human CD45-FITC/CD3-PE/Cyanine 5/CD4-PE/CD8-PE/Elab Fluor® 594 Cocktail

### Preparation & Storage

#### Storage

Keep as concentrated solution.

This product can be stored at 2-8°C for 12 months. Please protected from prolonged exposure to light and do not freeze.

#### Shipping

Ice bag

### Antigen Information

### For Research Use Only

Toll-free: 1-888-852-8623  
Web: [www.elabscience.com](http://www.elabscience.com)

Tel: 1-832-243-6086  
Email: [techsupport@elabscience.com](mailto:techsupport@elabscience.com)

Fax: 1-832-243-6017

Rev. V1.2

## Background

This product is a FCM antibody cocktail made up of FITC Anti-Human CD45 Antibody[HI30]

(Mouse IgG1,  $\kappa$ ), PE/Cyanine5 Anti-Human CD3 Antibody[OKT-3] (Mouse IgG2a,  $\kappa$ ), PE Anti-Human CD4 Antibody[SK3] (Mouse IgG1,  $\kappa$ ), PE/Elab Fluor® 594 Anti-Human CD8 Antibody[UCHT-4] (Mouse IgG1,  $\kappa$ ).

CD45 is a 180 - 240 kD single chain type I membrane glycoprotein also known as leukocyte common antigen (LCA) and T200. It is a tyrosine phosphatase expressed on the plasma membrane of all hematopoietic cells, except erythrocytes or platelets.

CD45 is a signaling molecule that regulates a variety of cellular processes including cell growth, differentiation, cell cycle, and oncogenic transformation. CD45 plays a critical role in T and B cell antigen receptor-mediated activation by dephosphorylating substrates including p56Lck, p59Fyn, and other Src family kinases. CD45 non-covalently associates with lymphocyte phosphatase-associated phosphoprotein (LPA P) on T and B lymphocytes. CD45 has been reported to bind galectin-1 and to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4.

CD3 $\epsilon$  is a 20 kD chain of the CD3/T cell receptor (TCR) complex, which is composed of two CD3 $\epsilon$ , one CD3 $\gamma$ , one CD3 $\delta$ , one CD3 $\zeta$  (CD247), and a T cell receptor ( $\alpha/\beta$  or  $\gamma/\delta$ ) heterodimer. It is found on all mature T lymphocytes, NK T cells, and some thymocytes.

CD3, also known as T3, is a member of the immunoglobulin superfamily that plays a role in antigen recognition, signal transduction, and T cell activation.

CD4, also known as T4, is a 55 kD single-chain type I transmembrane glycoprotein expressed on most thymocytes, a subset of T cells, and monocytes/macrophages.

CD4, a member of the Ig superfamily, recognizes antigens associated with MHC class II molecules and participates in cell-cell interactions, thymic differentiation, and signal transduction. CD4 acts as a primary receptor for HIV, binding to HIV gp120. CD4 has also been shown to interact with IL-16.

CD8a is a 32-34 kD type I glycoprotein. It forms a homodimer (CD8a/a) or heterodimer (CD8a/b) with CD8b. CD8, also known as T8 and Leu2, is a member of the immunoglobulin superfamily found on the majority of thymocytes, a subset of peripheral blood T cells, and NK cells (which express almost exclusively CD8a homodimers). CD8 acts as a co-receptor with MHC class I-restricted T cell receptors in antigen recognition and T cell activation and has been shown to play a role in thymic differentiation. Two domains in CD8a are important for function: the extracellular IgSF domain binds the  $\alpha 3$  domain of MHC class I and the cytoplasmic CXCP motif binds the tyrosine kinase p56 Lck.