

## anti-human CD45 FITC-conjugated

**FITC** - conjugated monoclonal antibody HI30 to human CD45

Cat-No: **21810453**

500 µl

**Clone:** HI30

**Specificity:** The antibody HI30 reacts with all alternative forms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except erythrocytes and platelets and non-hematopoietic tissues and cells. CD45 is critically required for T and B cell antigen receptor-mediated activation.

**Isotype subclass:** Mouse IgG1

**Form:** The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is adjusted for direct use. No reconstitution is necessary.

**Physical state:** Liquid

**Buffer/Additives/Preservative:** PBS containing 1 % BSA and 0.09 % sodium azide (pH 7.2)

**Expiration date:** The reagent is stable until the expiry date stated on the vial label

**Storage conditions:** Store at 4 °C. Avoid prolonged exposure to light.

**Application:** Flow Cytometry,

### References:

- \* Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
- \* Kishihara K, *et al.* 1993. *Cell* 74:143.
- \* Esser M, *et al.* 2001. *J. Virol.* 75:6173. (WB)
- \* Friedman T, *et al.* 1999. *J. Immunol.* 162:5256. (IHC)
- \* Rees LE, *et al.* 2003. *Clin. Exp. Immunol.* 134:497. (IF)

**Background:** **CD45** (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing; these isoforms differ in their extracellular domains, whereas they share identical transmembrane and cytoplasmic domains. These isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis.

**Warning:** Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

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