

## TECHNICAL DATA SHEET

### CyFlow™ CD45 Alexa Fluor™ 700 Anti-Hu; Clone MEM-28

**REF** AM293871

**For Research Use Only.**

**Not for use in diagnostic or therapeutic procedures.**

### Specifications

|                                    |                                    |
|------------------------------------|------------------------------------|
| <b>Antigen</b>                     | CD45                               |
| <b>Alternative Names</b>           | LCA, T200, B220                    |
| <b>Clone</b>                       | MEM-28                             |
| <b>Clonality</b>                   | monoclonal                         |
| <b>Format</b>                      | Alexa Fluor™ 700                   |
| <b>Host / Isotype</b>              | Mouse / IgG1                       |
| <b>Species Reactivity</b>          | Human                              |
| <b>Negative Species Reactivity</b> | Horse                              |
| <b>Quantity</b>                    | 100 tests                          |
| <b>Immunogen</b>                   | Human thymocytes and T lymphocytes |

### Specificity

The mouse monoclonal antibody MEM-28 recognizes all alternative forms of human CD45 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.

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## Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10<sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

## Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

## Storage and Stability

|                  |                                                                               |
|------------------|-------------------------------------------------------------------------------|
| <b>Storage</b>   | Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze. |
| <b>Stability</b> | Do not use after expiration date stamped on vial label.                       |

## Background Information

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.

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