

## TECHNICAL DATA SHEET

### CyFlow™ CD45RA Pacific Blue™ Anti-Hu; Clone MEM-56

**REF** CX414260

**For Research Use Only.**

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

### Specifications

<b>Antigen</b>	CD45RA
<b>Alternative Names</b>	Leu18
<b>Clone</b>	MEM-56
<b>Clonality</b>	monoclonal
<b>Format</b>	Pacific Blue™
<b>Host / Isotype</b>	Mouse / IgG2b
<b>Species Reactivity</b>	Human
<b>Negative Species Reactivity</b>	—
<b>Quantity</b>	100 tests
<b>Immunogen</b>	Human thymocytes and T lymphocytes

### Specificity

The mouse monoclonal antibody MEM-56 recognizes CD45RA antigen, a 205-220 kDa single chain type I glycoprotein, isoform of the leukocyte common antigen (LCA). CD45RA is expressed on most of B lymphocytes, resting and native T lymphocytes, medullar thymocytes and monocytes.

#### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

## 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

CD45RA is a high molecular weight isoform of a receptor-type protein tyrosine phosphatase, CD45 glycoprotein. CD45 is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases, promotes cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis. CD45 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. CD45RA is expressed e.g. on naive T cells and normal plasma cells.

## References

- Bazil V, Horejsi V, Baudys M, Kristofova H, Strominger JL, Kostka W, Hilgert I: Biochemical characterization of a soluble form of the 53-kDa monocyte surface antigen. Eur J Immunol. 1986 Dec; 16(12):1583-9. < PMID: 3493149 >
- Knapp W, Dorken B, Gilks W, Rieber EP, Schmidt RE, Stein H, von dem Borne AEGK (Eds): Leucocyte Typing IV. Oxford University Press, Oxford. 1989; 1-1820. < NLM ID: 8914679 >
- Bhunia AK, Arai T, Bulkley G, Chatterjee S: Lactosylceramide mediates tumor necrosis factor-alpha-induced intercellular adhesion molecule-1 (ICAM-1 expression and the adhesion of

---

### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

- neutrophil in human umbilical vein endothelial cells. J Biol Chem. 1998 Dec 18; 273(51):34349-57. < PMID: 9852101 >
- Cortez-Gonzalez X, Sidney J, Adotevi O, Sette A, Millard F, Lemonnier F, Langlade-Demoyen P, Zanetti M: Immunogenic HLA-B7-restricted peptides of hTRT. Int Immunol. 2006 Dec; 18(12):1707-18. < PMID: 17077179 >
  - Dawes R, Petrova S, Liu Z, Wraith D, Beverley PC, Tchilian EZ: Combinations of CD45 isoforms are crucial for immune function and disease. J Immunol. 2006 Mar 15; 176(6):3417-25. < PMID: 16517710 >
  - Li C, Wong P, Pan T, Xiao F, Yin S, Chang B, Kang SC, Ironside J, Sy MS: Normal cellular prion protein is a ligand of selectins: binding requires Le(X) but is inhibited by sLe(X). Biochem J. 2007 Sep 1; 406(2):333-41. < PMID: 17497959 >
  - Desharnais P, Dupéré-Minier G, Hamelin C, Devine P, Bernier J: Involvement of CD45 in DNA fragmentation in apoptosis induced by mitochondrial perturbing agents. Apoptosis. 2008 Feb; 13(2):197-212. < PMID: 18157742 >

---

The Safety Data Sheet for this product is available at [www.sysmex-partec.com/services](http://www.sysmex-partec.com/services).

This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is conditioned on the buyer using the purchased product solely in research conducted by the buyer, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com).

---

---

**Contact Information:**

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)