

TECHNICAL DATA SHEET

CyFlow™ CD45RB FITC Anti-Hu; Clone MEM-55

REF BM516399

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD45RB
Alternative Names	—
Clone	MEM-55
Clonality	monoclonal
Format	FITC
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Human thymocytes and T lymphocytes

Specificity

The mouse monoclonal antibody MEM-55 recognizes a sialidase-sensitive epitope of CD45RB antigen, a 180-240 kDa single chain type I membrane glycoprotein, isoform of the leukocyte common antigen

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

(LCA). CD45RB is expressed on a subset of T lymphocytes, B lymphocytes, monocytes, macrophages, granulocytes and dendritic cells.

Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 20 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (2 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

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

Background Information

CD45RB is 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. CD45RB is expressed e.g. in microglia and inflammatory cells.

References

- McMichael AJ, Beverley PCL, Cobbold S, et al. (Eds): Leucocyte Typing III, White Cell Differentiation Antigens. Oxford University Press, Oxford. 1987; 1-1050. < NLM ID: 8913266 >
- Horejší V, Angelisová P, Bazil V, Kristofová H, Stoyanov S, Stefanová I, Hausner P, Vosecký M, Hilgert I: Monoclonal antibodies against human leucocyte antigens (II); Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). Folia Biol (Praha). 1988; 34(1):23-34. < PMID: 2968928 >

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

- 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 >
- Doussis IA, Gatter KC, Mason DY: CD68 reactivity of non-macrophage derived tumours in cytological specimens. J Clin Pathol. 1993 Apr; 46(4):334-6. < PMID: 7684403 >
- Koene HR, Kleijer M, Algra J, Roos D, von dem Borne AE, de Haas M: Fc gammaRIIIa-158V/F polymorphism influences the binding of IgG by natural killer cell Fc gammaRIIIa, independently of the Fc gammaRIIIa-48L/R/H phenotype. Blood. 1997 Aug 1; 90(3):1109-14. < PMID: 9242542 >
- 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 neutrophil in human umbilical vein endothelial cells. J Biol Chem. 1998 Dec 18; 273(51):34349-57. < PMID: 9852101 >
- Townsend KP, Vendrame M, Ehrhart J, Faza B, Zeng J, Town T, Tan J: CD45 isoform RB as a molecular target to oppose lipopolysaccharide-induced microglial activation in mice. Neurosci Lett. 2004 May 13; 362(1):26-30. < PMID: 15147773 >
- Cortez-Gonzalez X, Sidney J, Adotevi O, Sette A, Millard F, Lemonnier F, Langlade-Demoyen P, Zanetti M: Immunogenic HLA-B7-restricted peptides of hTERT. 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.

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