

T5-273-T025

Monoclonal Antibody to CD31 PE-DyLight® 594 (25 tests)

Clone: MEM-05

Isotype: Mouse IgG1

Specificity: The antibody MEM-05 reacts with CD31 (PECAM-1), a 130-140 kDa type I

transmembrane glycoprotein expressed on monocytes, platelets, granulocytes,

endothelial cells and stem cells of the myeloid lineage.

Regulatory Status: RUO

Immunogen: Leukocytes of patient suffering from LGL-type leukaemia

Species Reactivity: Human

Preparation: The purified antibody is conjugated with tandem dye PE-DyLight™ 594

(PE-DL594) under optimum conditions. The conjugate is purified by size-exclusion

chromatography and adjusted for direct use. No reconstitution is necessary.

Storage Buffer: The reagent is provided in stabilizing phosphate buffered saline (PBS) solution

containing 15mM sodium azide.

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not

use after expiration date stamped on vial label.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using 4

μl reagent / 100 μl of whole blood or 10° cells in a suspension.

The content of a vial (0.1 ml) is sufficient for 25 tests.

Expiration: See vial label

Lot Number: See vial label

Background: CD31 (platelet endothelial cell adhesion molecule-1, PECAM-1) is an inhibitory

coreceptor involved in regulation of T cell and B cell signaling by a dual immunoreceptor tyrosine-based inhibitory motif (ITIM) that upon associated kinases-mediated phosphorylation provide docking sites for protein-tyrosine phosphatases. CD31 is expressed ubiquitously within the vascular compartment and is located mainly at junctions between adjacent cells. N-terminal Ig-like domain of CD31 is responsible for its homophilic binding, which plays an important role in cell-cell interactions. CD31 is a multifunctional molecule with diverse roles in modulation of integrin-mediated cell adhesion, transendothelial migration, angiogenesis, apoptosis, negative regulation of immunoreceptor signaling, autoimmunity, macrophage phagocytosis, IgE-mediated anaphylaxis and

thrombosis. It is one of key regulatory molecules in vascular system.



PRODUCT DATA SHEET

References:

*Newman DK, Hamilton C, Newman PJ: Inhibition of antigen-receptor signaling by Platelet Endothelial Cell Adhesion Molecule-1 (CD31) requires functional ITIMs, SHP-2, and p56(lck). Blood. 2001 Apr 15;97(8):2351-7.

*Wilkinson R, Lyons AB, Roberts D, Wong MX, Bartley PA, Jackson DE: Platelet endothelial cell adhesion molecule-1 (PECAM-1/CD31) acts as a regulator of B-cell development, B-cell antigen receptor (BCR)-mediated activation, and autoimmune disease. Blood. 2002 Jul 1;100(1):184-93.

*Jackson DE: The unfolding tale of PECAM-1. FEBS Lett. 2003 Apr 10;540(1-3):7-14.

*Wee JL, Jackson DE: The Ig-ITIM superfamily member PECAM-1 regulates the "outside-in" signaling properties of integrin alpha(IIb)beta3 in platelets. Blood. 2005 Dec 1;106(12):3816-23.

*Woodfin À, Voisin MB, Nourshargh S: PECAM-1: a multi-functional molecule in inflammation and vascular biology. Arterioscler Thromb Vasc Biol. 2007 Dec;27(12):2514-23.

*Wong MX, Hayball JD, Jackson DE: PECAM-1-regulated signalling thresholds control tolerance in anergic transgenic B-cells. Mol Immunol. 2007 Oct 29

*Prager E, Staffler G, Majdic O, Saemann M, Godar S, Zlabinger G, Stockinger H: Induction of hyporesponsiveness and impaired T lymphocyte activation by the CD31 receptor:ligand pathway in T cells. J Immunol. 2001 Feb 15;166(4):2364-71. *Cârţână T, Săftoiu A, Gruionu LG, Gheonea DI, Pirici D, Georgescu CV, Ciocâlteu A, Gruionu G: Confocal laser endomicroscopy for the morphometric evaluation of microvessels in human colorectal cancer using targeted anti-CD31 antibodies. PLoS One. 2012;7(12):e52815. doi: 10.1371/journal.pone.0052815.

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