

A7-273-T025

Monoclonal Antibody to CD31 Alexa Fluor® 700 conjugated (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.
Immunogen:	Leukocytes of patient suffering from LGL-type leukaemia
Species Reactivity:	Human
Preparation:	The purified antibody is conjugated with Alexa Fluor® 700 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 phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
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. Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 ⁶ 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 rebulation 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.

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****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.
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- *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 A, 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.
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- *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.

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