

TECHNICAL DATA SHEET

CyFlow™ CD31 Purified Anti-Hu; Clone MEM-05

REF BT257374

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD31
Alternative Names	PECAM-1, endoCAM, PECA1
Clone	MEM-05
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Leukocytes of a patient suffering from LGL-type Leukemia

Specificity

The mouse monoclonal antibody MEM-05 recognizes CD31 antigen, a 130-140 kDa type I transmembrane glycoprotein expressed on monocytes, platelets, granulocytes, endothelial cells and stem cells of the myeloid lineage.

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Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Western blot

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH \approx 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

CD31 (PECAM-1; platelet endothelial cell adhesion molecule-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.

References

- 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. < PMID: 11160294 >
- 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. < PMID: 11290597 >

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- 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):184-9. < PMID: 12759520 >
- Jackson DE: The unfolding tale of PECAM-1. *FEBS Lett*. 2003 Apr 10; 540(1-3):41821. < PMID: 12681475 >
- 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. < PMID: 16081692 >
- Woodfin A, Voisin MB, Nourshargh S: PECAM-1: a multi-functional molecule in inflammation and vascular biolog. *Arterioscler Thromb Vasc Biol*. 2007 Dec; 27(12):2514-23. < PMID: 17872453 >
- Wong MX, Hayball JD, Jackson DE: PECAM-1-regulated signalling thresholds control tolerance in anergic transgenic B-cells. *Mol Immunol*. 2008 Mar; 45(6):1767-81. < PMID: 17977600 >
- Cârțână T, Săftoiu A, Gruionu LG, Gheonea DI, Pirici D, Georgescu CV, Ciocâlțeu 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. < PMID: 23285192 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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