

Monoclonal Antibody to CD31 / PECAM1 - Azide Free

Alternate names:	EndoCAM, GPIIA', PECAM-1, Platelet endothelial cell adhesion molecule
Catalog No.:	SM007A
Quantity:	0.5 mg
Concentration:	0.5 mg/ml
Background:	<p>CD31, also known as platelet endothelial cell adhesion molecule 1 (PECAM1), is a type I integral membrane glycoprotein and a member of the immunoglobulin superfamily of cell surface receptors. It is constitutively expressed on the surface of endothelial cells, and concentrated at the junction between them. It is also weakly expressed on many peripheral lymphoid cells and platelets.</p> <p>CD31 has been used to measure angiogenesis in association with tumor recurrence. Other studies have also indicated that CD31 and CD34 can be used as markers for myeloid progenitor cells and recognize different subsets of myeloid leukemia infiltrates (granular sarcomas).</p> <p>PECAM-1 is a 130-140 kD protein, found on mouse monocytes, platelets, granulocytes and endothelial cells.</p>
Uniprot ID:	Q08481
NCBI:	10090
Host / Isotype:	Hamster / IgG
Clone:	2H8
Format:	<p>State: Liquid (sterile filtered) purified IgG fraction. Purification: Caprylic Acid Precipitation. Buffer System: PBS without preservatives or stabilizers.</p>
Applications:	<p>Flow Cytometry (0.1 µg/ml): Use 5 µl of the suggested working dilution to label 100 µl of whole blood.</p> <p>Functional Assays. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
Specificity:	<p>This antibody reacts with the 130-140kD protein, PECAM-1 found on mouse monocytes, platelets, granulocytes and endothelial cells.</p> <p>Clone 2H8 effectively inhibits transmigration of activated polymorphonuclear cells and monocytes across the endothelium. In a mouse model for acute peritonitis clone 2H8 blocks acute inflammation.</p> <p>Species: Mouse. Other species not tested.</p>

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

Storage: Store the antibody undiluted at -20°C only.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General References: 1. Xie, Y. & Muller, W.A. (1993) Molecular cloning and adhesive properties of murine platelet/endothelial cell adhesion molecule 1. *Proc. Natl. Acad. Sci.* 90: 5569-5573.
2. Bogen, S. et al. (1994) Monoclonal antibody to murine PECAM-1 (CD31) blocks acute inflammation in vivo. *J. Exp. Med.* 179: 1059-1064.
3. Newman, P.J. et al. (1992) Activation-dependent changes in human platelet PECAM-1: phosphorylation, cytoskeletal association, and surface membrane redistribution. *J. Cell Biol.* 119: 239-246.

References

1. Xie, Y. & Muller, W.A. (1993) Molecular cloning and adhesive properties of murine platelet/endothelial cell adhesion molecule 1. *Proc. Natl. Acad. Sci.* 90: 5569-5573.
2. Bogen, S. et al. (1994) Monoclonal antibody to murine PECAM-1 (CD31) blocks acute inflammation in vivo. *J. Exp. Med.* 179: 1059-1064.
3. Newman, P.J. et al. (1992) Activation-dependent changes in human platelet PECAM-1: phosphorylation, cytoskeletal association, and surface membrane redistribution. *J. Cell Biol.* 119: 239-246.
4. Bixel, M.G. et al. (2010) CD99 and CD99L2 act at the same site as, but independently of, PECAM-1 during leukocyte diapedesis. *Blood.* 116: 1172-84.
5. Ishikawa, J. et al. (2002) Use of anti-platelet-endothelial cell adhesion molecule-1 antibody in the control of disease progression in established collagen-induced arthritis in DBA/1J mice. *Jpn J Pharmacol.* 88: 332-40.
6. Thurston, G. et al (2005) Angiopoietin 1 causes vessel enlargement, without angiogenic sprouting, during a critical developmental period. *Development.* 132: 3317-26.
7. Lonsdorf, A.S. et al. (2012) Engagement of $\alpha\text{IIb}\beta\text{3}$ (GPIIb/IIIa) with $\alpha\text{v}\beta\text{3}$ Integrin Mediates Interaction of Melanoma Cells with Platelets: A CONNECTION TO HEMATOGENOUS METASTASIS. *J Biol Chem.* 287: 2168-78.
8. Rijcken, E. et al. (2007) PECAM-1 (CD 31) mediates transendothelial leukocyte migration in experimental colitis. *Am J Physiol Gastrointest Liver Physiol.* 293: G446-52.
9. Vielhauer, V. et al. (2005) Renal cell-expressed TNF receptor 2, not receptor 1, is essential for the development of glomerulonephritis. *J Clin Invest.* 115: 1199-209.

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