

Monoclonal Antibody to CD31 / PECAM1 - FITC

Alternate names:	EndoCAM, GPIIA', PECAM-1, Platelet endothelial cell adhesion molecule
Catalog No.:	SM272FX
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>
Uniprot ID:	Q3SWT0
NCBI:	NP_113779.1
GeneID:	29583
Host / Isotype:	Mouse / IgG1
Clone:	TLD-3A12
Immunogen:	Activated, Lewis rat derived microglial cells. Spleen cells from immunised BALB/c mouse were fused with cells of the mouse SP2 myeloma cell line.
Format:	State: Liquid purified IgG fraction Purification: Affinity Chromatography on Protein G Buffer System: PBS, pH 7.4 containing 1% BSA as stabilizer and 0.09% Sodium Azide as preservative. Label: FITC – Fluorescein Isothiocyanate Isomer I
Applications:	Flow Cytometry: Use 10 µl of 1/50-1/100 diluted antibody to label 10e6 cells in 100 µl. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognises PECAM-1 (CD31), a type 1 transmembrane protein expressed primarily on endothelial cells, platelets and leucocytes. Clone TLD-3A12 has been shown to partially block the proliferative response of antigen-specific CD4+ T cells to antigen-presenting cells and relevant antigen. (3) We recommend SM272LE for use in functional studies. Species: Rat. Other species not tested.

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 2-8°C for one month or (in aliquots) at -20°C for longer. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General References:

1. Flaris, N.A. et al. (1993) Characterisation of microglia and macrophages in the central nervous system of the rat. *GLIA* 7: 34-40.
2. Male, D. et al. (1995) An interferon inducible molecule on brain endothelium which controls lymphocyte adhesion mediated by integrins. *Immunology* 84: 453-460.
3. Williams, K.C. et al. (1996) PECAM-1 (CD31) expression in the central nervous system and its role in experimental allergic encephalomyelitis in the rat. *J. Neurosci. Res.* 45(6):747-57.
4. Stevenson, K.S. et al. (2009) Isolation, characterization, and differentiation of thy1.1-sorted pancreatic adult progenitor cell populations. *Stem Cells Dev.* 18: 1389-98.
5. Ott, I. et al. (2005) Endothelial-like cells expanded from CD34+ blood cells improve left ventricular function after experimental myocardial infarction. *FASEB J.* 19: 992-4.
6. Fujimoto, K.L. et al. (2007) An elastic, biodegradable cardiac patch induces contractile smooth muscle and improves cardiac remodeling and function in subacute myocardial infarction. *J Am Coll Cardiol.* 49: 2292-300.
7. Thebault, P. et al. (2010) The C-type lectin-like receptor CLEC-1, expressed by myeloid cells and endothelial cells, is up-regulated by immunoregulatory mediators and moderates T cell activation. *J Immunol.* 183: 3099-108.
8. Graham, M.J. et al. (1998) In vivo distribution and metabolism of a phosphorothioate oligonucleotide within rat liver after intravenous administration. *J Pharmacol Exp Ther.* 286: 447-58.
9. Haywood, L. et al. (2003) Inflammation and angiogenesis in osteoarthritis. *Arthritis Rheum.* 48: 2173-7.
10. Kielian, T. and Hickey, W.F. (2010) Proinflammatory cytokine, chemokine, and cellular adhesion molecule expression during the acute phase of experimental brain abscess development. *Am J Pathol.* 157: 647-58.
11. Lochhead, J.J. et al. (2010) Oxidative stress increases blood-brain barrier permeability and induces alterations in occludin during hypoxia-reoxygenation. *J Cereb Blood Flow Metab.* 30: 1625-36.
12. Nakao, A. et al. (2003) Carbon monoxide inhalation protects rat intestinal grafts from ischemia/reperfusion injury. *Am J Pathol.* 163: 1587-98.
13. Nakao, A. et al. (2011) Ex vivo carbon monoxide delivery inhibits intimal hyperplasia in arterialized vein grafts. *Cardiovasc Res.* 89: 457-63.
14. Schilte, M.N. et al. (2009) Long-term intervention with heparins in a rat model of peritoneal dialysis. *Perit Dial Int.* 29: 26-35.
15. Seegers, H.C. et al. (2003) Enhancement of angiogenesis by endogenous substance P release and neurokinin-1 receptors during neurogenic inflammation. *J Pharmacol Exp Ther.* 306: 8-12.

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