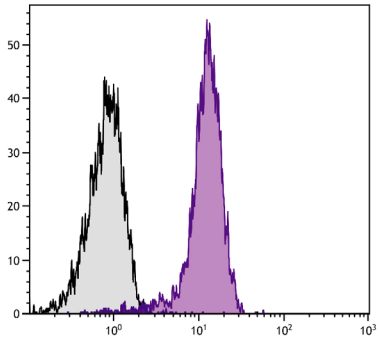
SouthernBiotech

Rat Anti-Mouse CD31

Cat. No.	Format	Size
1625-01	Purified (UNLB)	0.5 mg
1625-02	Fluorescein (FITC)	0.5 mg
1625-08	Biotin (BIOT)	0.5 mg
1625-09	R-phycoerythrin (PE)	0.1 mg
1625-09L	R-phycoerythrin (PE)	0.2 mg
1625-11	Allophycocyanin (APC)	0.1 mg
1625-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg
1625-17	R-phycoerythrin-Cyanine 7 (PE/CY7)	0.1 mg
1625-26	Pacific Blue™ (PACBLU)	0.1 mg
1625-30	Alexa Fluor® 488 (AF488)	0.1 mg
1625-31	Alexa Fluor® 647 (AF647)	0.1 mg



BALB/c mouse splenocytes were stained with Rat Anti-Mouse CD31-APC (SB Cat. No. 1625-11).

Overview

Clone 390
Isotype Rat (Lewis) $IgG_{2a}\kappa$
Immunogen C3H/HeJ mouse hematopoietic progenitor cell line 32D
Specificity Mouse CD31; Mr 130-140 kDa
Alternate Name(s) Platelet endothelial cell adhesion molecule, PECAM-1, endoCAM, GPIIa

Description

CD31, also known as platelet endothelial cell adhesion molecule-1 (PECAM-1), 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. CD31 interacts homotypically in cell adhesion assays. The monoclonal antibody 390 inhibits the aggregation of L cells transfected with a variant form of CD31.

Applications

FC – Quality tested [1,10-12,14]
IHC-FS – Reported in literature [1-8]
ICC – Reported in literature [9]
IP – Reported in literature [1,14]
Block – Reported in literature [13,14]

Working Dilutions

Flow Cytometry	Purified (UNLB) antibody	≤ 1 µg/10^6 cells
	FITC, BIOT, PACBLU, and AF488 conjugates	≤ 1 µg/10^6 cells
	PE, APC, PE/CY7 and AF647 conjugates	≤ 0.2 µg/10^6 cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 µL	
Other Applications	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

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Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added*. Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg purified immunoglobulin in 1.0 mL of PBS. Contains no preservative; handle under aseptic conditions. Store at 2-8°C or aliquot into smaller volumes and store at -20°C. Avoid multiple freeze / thaw cycles.
- The R-phycoerythrin-Cyanine 7 (PE/CY7) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The Alexa Fluor® 488 (AF488), Alexa Fluor® 647 (AF647), and Pacific Blue™ (PACBLU) conjugates are supplied as 0.1 mg in 0.2 mL of PBS/NaN_3. Store at 2-8°C.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

1. Baldwin HS, Shen HM, Yan H, DeLisser HM, Chung A, Mickanin C, et al. Platelet endothelial cell adhesion molecule-1 (PECAM-1/CD31): alternatively spliced, functionally distinct isoforms expressed during mammalian cardiovascular development. Development. 1994;120:2539-53. (Immunogen, FC, IP, IHC-FS)
2. Popa ER, Harmsen MC, Tio RA, van der Strate BW, Brouwer LA, Schipper M, et al. Circulating $CD34^+$ progenitor cells modulate host angiogenesis and inflammation in vivo. J Mol Cell Cardiol. 2006;41:86-96. (IHC-FS)
3. Salmon BA, Siemann DW. Characterizing the tumor response to treatment with combretastatin A4 phosphate. Int J Radiat Oncol Biol Phys. 2007;68:211-7. (IHC-FS)
4. Xu Y, Arai H, Murayama T, Kita T, Yokode M. Hypercholesterolemia contributes to the development of atherosclerosis and vascular remodeling by recruiting bone marrow-derived cells in cuff-induced vascular injury. Biochem Biophys Res Commun. 2007;363:782-7. (IHC-FS)
5. Kerber M, Reiss Y, Wickersheim A, Jugold M, Kiessling F, Heil M, et al. Flt-1 signaling in macrophages promotes glioma growth in vivo. Cancer Res. 2008;68:7342-51. (IHC-FS)
6. Sarraf-Yazdi S, Mi J, Moeller BJ, Niu X, White RR, Kontos CD, et al. Inhibition of in vivo tumor angiogenesis and growth via systemic delivery of an angiopoietin 2-specific RNA aptamer. J Surg Res. 2008;146:16-23. (IHC-FS)
7. Kojima T, Kanemaru S, Hirano S, Tateya I, Ohno S, Nakamura T, et al. Regeneration of radiation damaged salivary glands with adipose-derived stromal cells. Laryngoscope. 2011;121:1864-9. (IHC-FS)
8. Villalta SA, Lang J, Kubeck S, Kabre B, Szot GL, Calderon B, et al. Inhibition of VEGFR-2 reverses type 1 diabetes in NOD mice by abrogating insulitis and restoring islet function. Diabetes. 2013;62:2870-8. (IHC-FS)
9. Zhang H, Nieves JL, Fraser ST, Isern J, Douvaras P, Papatsenko D, et al. Expression of podocalyxin separates the hematopoietic and vascular potentials of mouse embryonic stem cell-derived mesoderm. Stem Cells. 2014;32:191-203. (ICC)
10. Pevsner-Fischer M, Morad V, Cohen-Sfady M, Rousso-Noori L, Zanin-Zhorov A, Cohen S, et al. Toll-like receptors and their ligands control mesenchymal stem cell functions. Blood. 2007;109:1422-32. (FC)
11. Motohashi N, Uezumi A, Yada E, Fukada S, Fukushima K, Imaizumi K, et al. Muscle CD31(-) CD45(-) side population cells promote muscle regeneration by stimulating proliferation and migration of myoblasts. Am J Pathol. 2008;173:781-91. (FC)
12. Cao G, Fehrenbach ML, Williams JT, Finklestein JM, Zhu J, DeLisser HM. Angiogenesis in platelet endothelial cell adhesion molecule-1-null mice. Am J Pathol. 2009;175:903-15. (FC)
13. DeLisser HM, Christofidou-Solomidou M, Strieter RM, Burdick MD, Robinson CS, Wexler RS, et al. Involvement of endothelial PECAM-1/CD31 in angiogenesis. Am J Pathol. 1997;151:671-7. (Block)
14. Rosenblum WI, Nelson GH, Wormley B, Werner P, Wang J, Shih CC. Role of platelet-endothelial cell adhesion molecule (PECAM) in platelet adhesion/aggregation over injured but not denuded endothelium in vivo and ex vivo. Stroke. 1996;27:709-11. (Block, FC, IP)

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