

Pacific Blue™ anti-human CD31 Antibody

Catalog# / Size	303113 / 25 µg 303114 / 100 µg
Clone	WM59
Regulatory Status	RUO
Workshop	V P025
Other Names	PECAM-1, EndoCAM
Isotype	Mouse IgG1, κ
Description	CD31 is a 130-140 kD type I transmembrane glycoprotein also known as platelet endothelial cell adhesion molecule-1 (PECAM-1) or Endocam. It is expressed on monocytes, platelets, granulocytes, endothelial cells and lymphocyte subsets. CD31 has been reported to bind CD38 and be involved in wound healing, angiogenesis, and cellular migration in an inflammatory situation.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 2.0 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Violet Laser (405 nm)
Application Notes	<p>Clone WM59 has been reported to recognize the D2 extracellular portion of CD31.</p> <p>Additional reported applications (for the relevant formats) include: immunofluorescence microscopy², immunohistochemical staining of acetone-fixed frozen tissue sections⁸, blocking of platelet aggregation³, and spatial biology (IBEX)^{11,12}. Clone WM59 is not recommended for immunohistochemical staining of formalin-fixed paraffin-embedded sections. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 303143 & 303144).</p> <p>The purified WM59 antibody is useful as a capture antibody for a sandwich ELISA assay, when</p>

used in conjunction with biotin anti-human CD31 antibody (Cat. No. 536604) antibody as the detection antibody.

Application References

(PubMed link indicates BioLegend citation)

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2. Muczynski KA, *et al.* 2003. *J. Am. Soc. Nephrol.* 14:1336. (IF)
3. Wu XW, *et al.* 1997. *Arterioscl. Throm. Vas.* 17:3154. (Block)
4. Nagano M, *et al.* 2007. *Blood* 110:151. (FC) [PubMed](#)
5. MacFadyen JR, *et al.* 2005. *FEBS Lett.* 579:2569. [PubMed](#)
6. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
7. Sestak K, *et al.* 2007. *Vet. Immunol. Immunopathol.* 119:21.
8. Wicki A, *et al.* 2012. *Clin. Cancer Res.* 18:454. (FC, IHC) [PubMed](#)
9. Oeztuerk-Winder F, *et al.* 2012. *EMBO J.* 31:3431. (FC) [PubMed](#)
10. Shushway ME, *et al.* 2014. *Biol Reprod.* 90(5): 110 (IF) [PubMed](#)
11. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
12. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Peavey J, *et al.* 2020. *Invest Ophthalmol Vis Sci.* 61:19:00. [PubMed](#)
2. Borrelli MR, *et al.* 2020. *Stem Cells Transl Med.* 1.339583333. [PubMed](#)
3. Qiu J, *et al.* 2020. *Cell Rep.* 33:108465. [PubMed](#)
4. Skowron K, *et al.* 2016. *Sci Rep.* 6:35854. [PubMed](#)
5. Nausch N, *et al.* 2012. *Sci Rep.* 0.4111111111. [PubMed](#)
6. Cordeiro O, *et al.* 2016. *PLoS One.* 11: 0151848. [PubMed](#)
7. Noguchi Y, *et al.* 2021. *Sci Rep.* 11:8383. [PubMed](#)
8. Seery V, *et al.* 2021. *EBioMedicine.* 67:103357. [PubMed](#)
9. Pastar I, *et al.* 2021. *J Clin Invest.* :e133727. [PubMed](#)
10. Santoro S, *et al.* 2015. *Cancer Immunol Res.* 3:68. [PubMed](#)
11. Leavitt T, *et al.* 2020. *Cell Rep.* 33:108356. [PubMed](#)
12. Peavey J, *et al.* 2022. *Cells.* 11: [PubMed](#)
13. Deleon NMD, *et al.* 2021. *J Tissue Eng Regen Med.* 15:1105. [PubMed](#)

RRID

AB_1877196 (BioLegend Cat. No. 303113)
AB_2114316 (BioLegend Cat. No. 303114)

Antigen Details

Structure	Ig superfamily, type I transmembrane glycoprotein, 130-140 kD
Distribution	Monocytes, platelets, granulocytes, endothelial cells, lymphocyte subset
Function	Cell adhesion, signal transduction
Ligand/Receptor	CD38
Cell Type	Endothelial cells, Granulocytes, Lymphocytes, Monocytes, Neutrophils, Platelets
Biology Area	Angiogenesis, Cell Adhesion, Cell Biology, Immunology, Neuroinflammation, Neuroscience
Molecular Family	Adhesion Molecules, CD Molecules

Antigen References

1. DeLisser H, *et al.* 1994. *Immunol. Today* 15:490.
2. Newman P, 1997. *J. Clin. Invest.* 99:3.
3. Fawcett J, *et al.* 1995. *J. Cell Biol.* 128:1229.

Gene ID

[5175](#)

Related Protocols

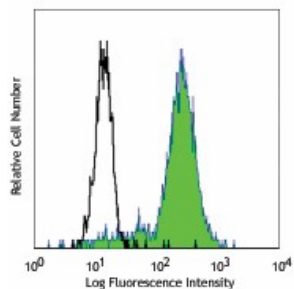
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

FITC anti-human CD31, PE anti-human CD31, Purified anti-human CD31, Alexa Fluor® 488 anti-human CD31, Alexa Fluor® 647 anti-human CD31, Pacific Blue™ anti-human CD31, APC anti-human CD31, PE/Cyanine7 anti-human CD31, APC/Cyanine7 anti-human CD31, Brilliant Violet 605™ anti-human CD31, Brilliant Violet 421™ anti-human CD31, Purified anti-human CD31 (Maxpar® Ready), Alexa Fluor® 594 anti-human CD31, PE/Dazzle™ 594 anti-human CD31, PerCP/Cyanine5.5 anti-human CD31, Alexa

Fluor® 700 anti-human CD31, Brilliant Violet 711™ anti-human CD31, TotalSeq™-A0124 anti-human CD31, TotalSeq™-C0124 anti-human CD31, APC/Fire™ 750 anti-human CD31, Ultra-LEAF™ Purified anti-human CD31, TotalSeq™-B0124 anti-human CD31, Brilliant Violet 785™ anti-human CD31, PE/Cyanine5 anti-human CD31, TotalSeq™-D0124 anti-human CD31

Product Data



Human peripheral blood monocytes were stained with CD31 (clone WM59) Pacific Blue™ (filled histogram) or mouse IgG1, κ Pacific Blue™ isotype control (open histogram).

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587