

## Alexa Fluor<sup>®</sup> 594 anti-human CD31 Antibody

<b>Catalog# / Size</b>	303126 / 100 µg
<b>Clone</b>	WM59
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	V P025
<b>Other Names</b>	PECAM-1, EndoCAM
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	African Green, Baboon
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 594 under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by immunocytochemistry. For immunocytochemistry, a concentration range of 5.0 - 10 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor<sup>®</sup> 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.</p> <p>Alexa Fluor<sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	<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 microscopy<sup>2</sup>, immunohistochemical staining of acetone-fixed frozen tissue sections<sup>8</sup>, blocking of platelet aggregation<sup>3</sup>, and spatial biology (IBEX)<sup>11,12</sup>. Clone WM59 is not recommended for immunohistochemical staining of formalin-fixed paraffin-embedded sections. The Ultra-LEAF™ purified antibody (Endotoxin &lt; 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 303143 &amp; 303144).</p> <p>The purified WM59 antibody is useful as a capture antibody for a sandwich ELISA assay, when used in conjunction with biotin anti-human CD31 antibody (Cat. No. 536604) antibody as the detection antibody.</p>

### Application References

**(PubMed link indicates  
BioLegend citation)**

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V Oxford University Press. New York.
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. Bushway 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. Jeon NL, *et al.* 2020. *Biotechnol Bioeng.* 117:748. [PubMed](#)
2. Jones CFE, *et al.* 2022. *Front Bioeng Biotechnol.* 10:915702. [PubMed](#)
3. Fenton TM, *et al.* 2020. *Immunity.* 52(3):557-570. [PubMed](#)
4. Brumeanu TD, *et al.* 2020. *bioRxiv.* . [PubMed](#)
5. King D, *et al.* 2019. *Sci Rep.* 9:4157. [PubMed](#)
6. Grüneboom A, *et al.* 2019. *Nat Metab.* 0.205555556. [PubMed](#)
7. Kondo H, *et al.* 2021. *Cell Reports.* 34(7):108750. [PubMed](#)
8. Noonan J, *et al.* 2019. *Theranostics.* 8:6195. [PubMed](#)
9. Noonan J, *et al.* 2019. *Front Immunol.* 10:849. [PubMed](#)

**RRID**

AB\_2563303 (BioLegend Cat. No. 303126)

**Antigen Details**

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

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[Immunocytochemistry Staining Protocol](#)

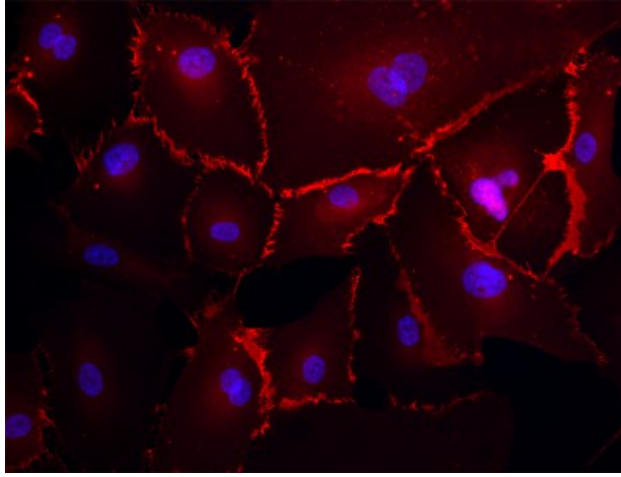
**Other Formats**

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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**

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HUVEC human endothelial cells were fixed with 1% paraformaldehyde (PFA) and blocked with 5% FBS for 30 minutes. Then the cells were stained with 10  $\mu\text{g/ml}$  anti-human CD31 (clone WM59) Alexa Fluor<sup>®</sup> 594 (red) at room temperature for 3 hours in dark. Nuclei were counterstained with DAPI (blue). The image was captured with a 40X objective.

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