

PE/Fire™ 744 anti-human CD31 Antibody

Catalog# / Size	303159 / 25 tests 303160 / 100 tests
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 and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Fire™ 744 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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	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 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. True-Stain Monocyte Blocker™ (Cat No. 426102) is recommended to minimize non-specific staining of PE/Fire™ 744 on monocytes and macrophages. * PE/Fire™ 744 has a maximum excitation of 565 nm and a maximum emission of 744 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone WM59 has been reported to recognize the D2 extracellular portion of CD31. 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).

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.

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](#)

RRID

AB_3720502 (BioLegend Cat. No. 303159)

AB_3720502 (BioLegend Cat. No. 303160)

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, <i>et al.</i> 1994. <i>Immunol. Today</i> 15:490. 2. Newman P, 1997. <i>J. Clin. Invest.</i> 99:3. 3. Fawcett J, <i>et al.</i> 1995. <i>J. Cell Biol.</i> 128:1229.

Gene ID

[5175](#)

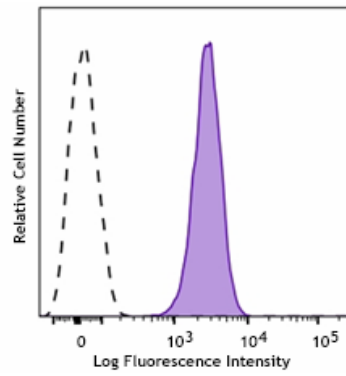
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

TotalSeq™-D0124 anti-human CD31, PE/Cyanine5 anti-human CD31, Spark YG™ 581 anti-human CD31, PE/Fire™ 700 anti-human CD31, Brilliant Violet 510™ anti-human CD31, Alexa Fluor® 594 anti-human CD31, Spark Red™ 718 anti-human CD31 (Flexi-Fluor™), Purified anti-human CD31 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD31, PerCP/Cyanine5.5 anti-human CD31, Alexa Fluor® 700 anti-human CD31, Brilliant Violet 711™ anti-human CD31, PE/Cyanine7 anti-human CD31, Pacific Blue™ anti-human CD31, APC anti-human CD31, APC/Cyanine7 anti-human CD31, Purified anti-human CD31, Spark PLUS V475™ anti-human CD31 (Flexi-Fluor™), Alexa Fluor® 647 anti-human CD31, APC/Fire™ 750 anti-human CD31, Ultra-LEAF™ Purified anti-human CD31, Brilliant Violet 785™ anti-human CD31, Brilliant Violet 605™ anti-human CD31, Brilliant Violet 421™ anti-human CD31, Spark Blue™ 550 anti-human CD31 (Flexi-Fluor™), Alexa Fluor® 488 anti-human CD31, TotalSeq™-C0124 anti-human CD31, FITC anti-human CD31, PE anti-human CD31, PE/Fire™ 744 anti-human CD31, TotalSeq™-A0124 anti-human CD31, TotalSeq™-B0124 anti-human CD31

Product Data



Human peripheral blood granulocytes were stained with anti-human CD31 (clone WM59) PE/Fire™ 744 (filled histogram) or mouse IgG1, κ PE/Fire™ 744 isotype control (open histogram).

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