

APC anti-mouse CD31 Antibody

Catalog# / Size	102509 / 25 µg 102510 / 100 µg
Clone	MEC13.3
Other Names	PECAM-1, EndoCAM
Isotype	Rat IgG2a, κ
Description	CD31 is a 130-140 kD glycoprotein, also known as platelet endothelial cell adhesion molecule (PECAM-1), EndoCAM, and gpIIa. It is a member of the Ig superfamily, expressed on endothelial cells, platelets, granulocytes, monocytes/macrophages, dendritic cells, and T and B cell subsets, and is critical for cell-to-cell interactions. The primary ligands for CD31 have been reported to be CD38 and the vitronectin receptor (α _v β ₃ integrin, CD51/CD61). Other reported functions of CD31 are neutrophil emigration to sites of inflammation, and angiogenesis.

Product Details

Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Polyoma middle T transformed EC line tEnd.1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.
Concentration	0.2 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	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 ≤ 0.25 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Red Laser (633 nm)
Application Notes	Anti-mouse CD31 clones 390 and MEC13.3 bind to their respective non-overlapping epitopes in IgD2 of CD31. ⁵ Additional reported applications (in the relevant formats) include: immunoprecipitation ¹ , <i>in vitro</i> and <i>in vivo</i> blocking of CD31-mediated cell-cell interactions ^{1,4} , and immunohistochemical staining ^{1,5,6} of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections. Special Note: The antibody works well on acetone-fixed frozen sections as well as Zinc-fixed paraffin-embedded sections. It sometime works on formalin-fixed and paraformaldehyde-fixed paraffin-embedded tissue sections but inconsistent results have been reported. This antibody is not recommended for formalin-fixed paraffin-embedded sections or for Western blot analysis. The Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 102529 and 102530).
Application References	<ol style="list-style-type: none"> 1. Vecchi A, et al. 1994. Eur. J. Cell Biol. 63:247. (IP, IHC, Block) 2. Christofidou-Solomidou M, et al. 1997. J. Immunol. 158:4872. (Block) 3. DeLisser HM, et al. 1997. Am. J. Pathol. 151:671. (Block) 4. Rosenblum WI, et al. 1994. Am. J. Pathol. 145:33. (Block) 5. Baldwin HS, et al. 1994. Development 120:2539. (IHC) 6. Voswinkel R, et al. 2003. Circ. Res. 93:372. (IHC) 7. Leung VW, et al. 2009. Am J. Pathol. 175:1757. PubMed 8. Chacko AM, et al. 2012. PLoS One 7:e34958. 9. Giacomini C, et al. 2014. Exp Eye Res. 18:1. PubMed 10. Morita R, et al. 2015. PNAS. 112:160. PubMed 11. Ito A, et al. 2015. Brain Res. 1594:310. PubMed
Product Citations	<ol style="list-style-type: none"> 1. Lafkas D, et al. 2013. J Cell Biol. 203:47. PubMed

2. Gao X, et al. 2013. J Exp Med. 210:2833. PubMed
3. Bajwa A, et al. 2014. J Am Soc Nephrol. 26:908. PubMed
4. Elias S, et al. 2015. PLoS Biol. 13:1002142. PubMed
5. Ahmed M, et al. 2016. Development. 143: 1663 - 1673. PubMed
6. Rantakari P, et al. 2016. Nature. 538:392-396. PubMed
7. Chiche A, et al. 2016. Oncogene. 10.1038/onc.2016.396. PubMed
8. Mueller A, et al. 2016. Nature. 540:276-279. PubMed
9. J Gautam, X Zhang, Y Yao 2016. Sci Rep. 6:36450. PubMed
10. Peuhu E, et al. 2017. EMBO J. 36(2):165-182. PubMed
11. Wang L, et al. 2018. Bone Res. 6:22. PubMed
12. Chiche A, et al. 2019. Breast Cancer Res. 21:13. PubMed

RRID AB_312916 (BioLegend Cat. No. 102509)
 AB_312917 (BioLegend Cat. No. 102510)

Antigen Details

Structure	Ig superfamily, 130-140 kD
Distribution	Endothelial cells, platelets, granulocytes, monocytes/macrophages, dendritic cells, T and B cell subsets
Function	Adhesion
Ligand/Receptor	CD38, $\alpha_v\beta_3$ integrin
Cell Type	B cells, Dendritic cells, Endothelial cells, Granulocytes, Macrophages, Monocytes, Neutrophils, Platelets, T cells
Biology Area	Angiogenesis, Cell Adhesion, Cell Biology, Immunology, Neuroinflammation, Neuroscience
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Barclay AN, et al. 1997. The Leukocyte Antigen FactsBook Academic Press. 2. DeLisser HM, et al. 1994. Immunol. Today 15:490. 3. Newman PJ, et al. 1990. Science 247:1219.
Gene ID	18613

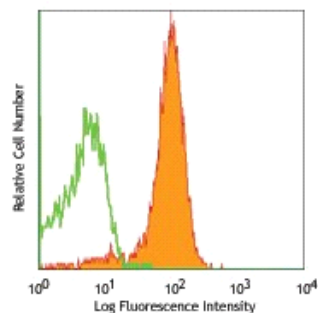
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Biotin anti-mouse CD31, FITC anti-mouse CD31, PE anti-mouse CD31, Purified anti-mouse CD31, Alexa Fluor® 488 anti-mouse CD31, Alexa Fluor® 647 anti-mouse CD31, Alexa Fluor® 594 anti-mouse CD31, PerCP/Cyanine5.5 anti-mouse CD31, PE/Cyanine7 anti-mouse CD31, PE/Dazzle™ 594 anti-mouse CD31, APC/Fire™ 750 anti-mouse CD31, Ultra-LEAF™ Purified anti-mouse CD31, APC/Cyanine7 anti-mouse CD31

Product Data



C57BL/6 splenocytes stained with MEC13.3 APC

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