

Product datasheet for **TA336675**

CD31 (PECAM1) Rat Monoclonal Antibody [Clone ID: MEC13.3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	MEC13.3
Applications:	CyTOF-ready, FC, ICC/IF, IHC, IP
Recommended Dilution:	Immunohistochemistry-Frozen: 1:100 , Immunohistochemistry: 1:100-1:500, Immunoprecipitation: 1:10-1:500, Immunocytochemistry/ Immunofluorescence: 1:500 - 1:1000, Flow Cytometry: 2.5 ug/ml, Flow (Cell Surface): 2.5 ug/ml, In vivo assay, CyTOF-ready
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	mouse endothelial cell line T-end
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	platelet and endothelial cell adhesion molecule 1
Database Link:	NP_000433 Entrez Gene 18613 Mouse P16284



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Background:

CD31/PECAM1 is commonly used as an endothelial marker, particularly in angiogenesis. CD31 is important in assisting placental and endometrial vascular development. However, CD31 is also associated with many negative angiogenic occurrences, particularly those within or related to tumors and other disease lesions. In MS, plasma microparticles carry CD31 and are important in the formation of brain lesions associated with MS. In cardiac angiosarcoma, CD31 presence is indicative of the severity of the disease. In prostate tumor cells, CD31 is upregulated and associated with increased levels of HIF1a, VEGF, and other hypoxic markers. This relationship seems to indicate that when prostate cancer reaches a sufficient state of development that intense angiogenesis must occur in order to support the ongoing growth and survival of the cancer cells. In all, CD31 is a great marker for normal and disease-induced angiogenesis.

Synonyms:

CD31; EndoCAM; endoCAM; GPIIA; PECA1; PECAM-1

Note:

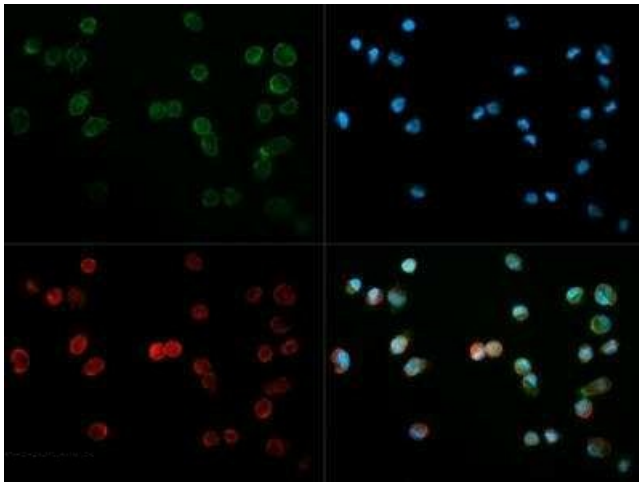
This CD31/PECAM1 Antibody (MEC13.3) is useful for Flow Cytometry, Immunoprecipitation, Immunohistochemical staining of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, and in vitro and in vivo blocking of CD31-mediated cell-cell interactions. Please Note: NB600-1475 works well on acetone-fixed frozen sections as well as zinc-fixed paraffin-embedded sections. However, it is not recommended for formalin-fixed paraffin-embedded sections due to inconsistent results. In vivo assay was reported in scientific literature. Use in vitro assays reported in scientific literature (PMID 24647208)

Protein Families:

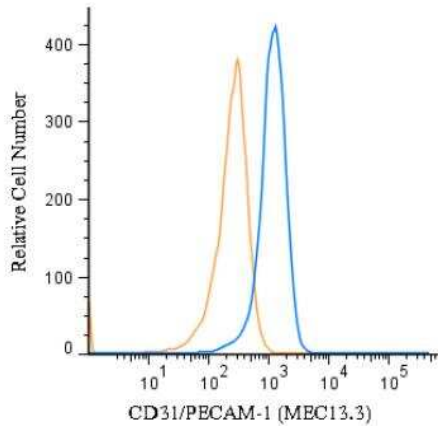
Druggable Genome, ES Cell Differentiation/IPS, Transmembrane

Protein Pathways:

Cell adhesion molecules (CAMs), Leukocyte transendothelial migration

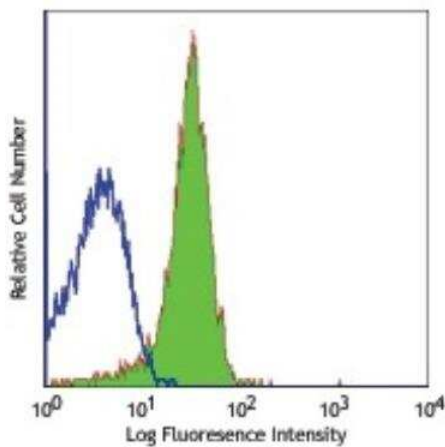
Product images:

Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - was tested in Wehi-3 cells with Dylight 488 (green). Nuclei and beta-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).

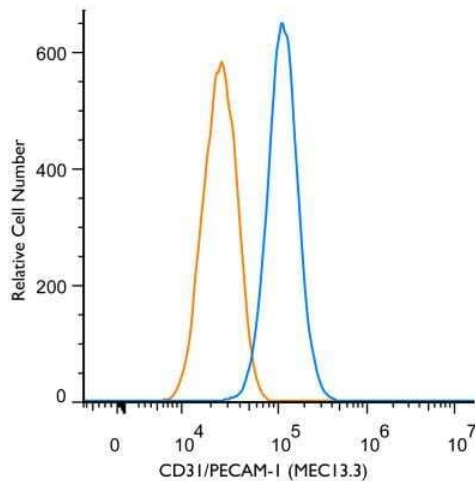


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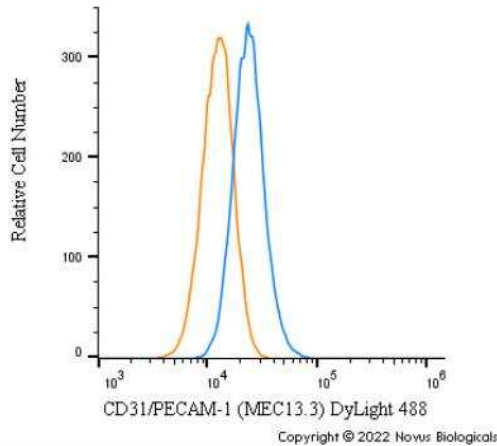
Flow (Cell Surface): CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on WEHI-3 Cells with CD31 (MEC13.3) antibody TA336675 (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 ug/mL for 20 minutes at room temperature, followed by rat F(ab)₂ IgG (H+L) APC-conjugated secondary antibody (F0113, R&D Systems).



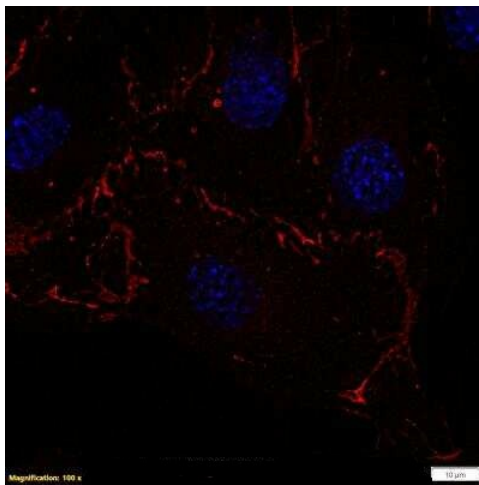
Flow Cytometry: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - C57BL/6 mouse splenocytes stained with purified CD31/PECAM-1 Antibody (MEC13.3), followed by anti-rat IgG FITC



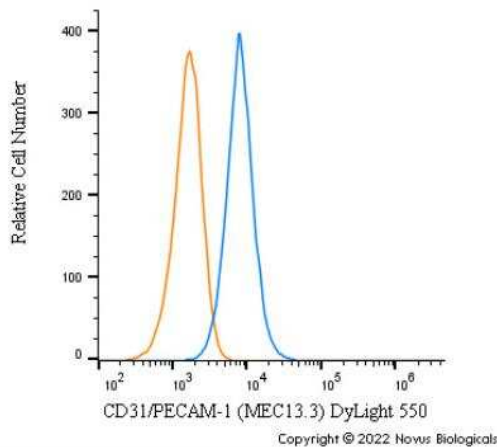
Flow (Cell Surface): CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on WEHI-3 Cells with CD31/PECAM-1 Antibody (MEC13.3) (TA336675, blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 ug/mL for 20 minutes at room temperature, followed by rat F(ab)₂ IgG (H+L) APC-conjugated secondary antibody (F0113, R&D Systems).



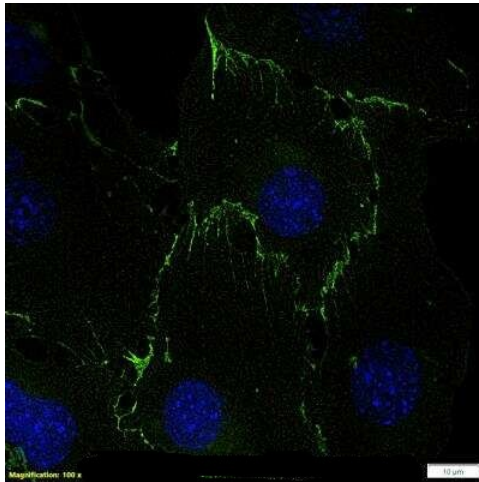
Flow Cytometry: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on MS1 cells with CD31/PECAM-1 [MEC13.3] Antibody [TA336675G] (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to DyLight 488.



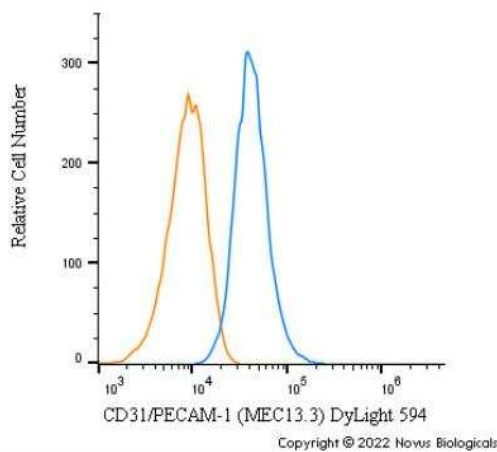
Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - Mouse MS1 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD31/PECAM-1 Antibody [MEC13.3] conjugated to DyLight 550 (TA336675R) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



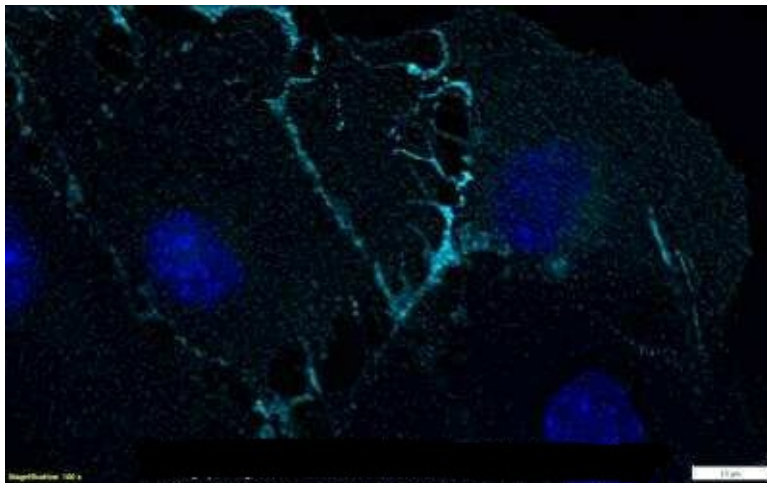
Flow Cytometry: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on MS1 cells with CD31/PECAM-1 [MEC13.3] Antibody TA336675R (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to DyLight 550.



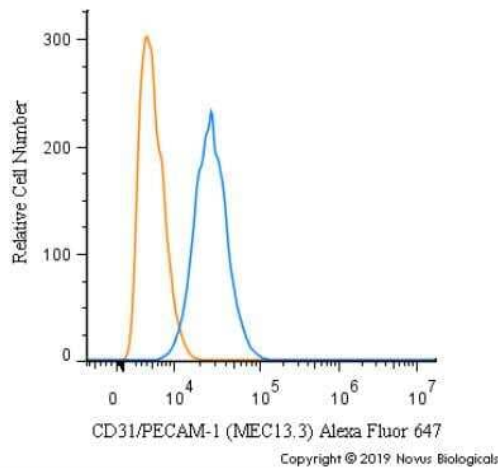
Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - Mouse MS1 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD31/PECAM-1 Antibody [MEC13.3] conjugated to DyLight 488 ([TA336675G]) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



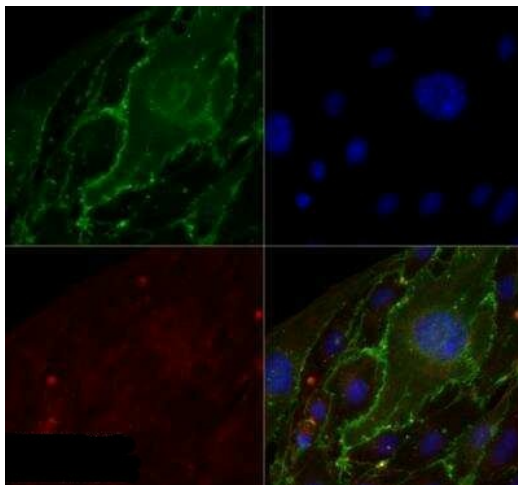
Flow Cytometry: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on MS1 cells with CD31/PECAM-1 [MEC13.3] Antibody TA336675DL594 (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to DyLight 594.



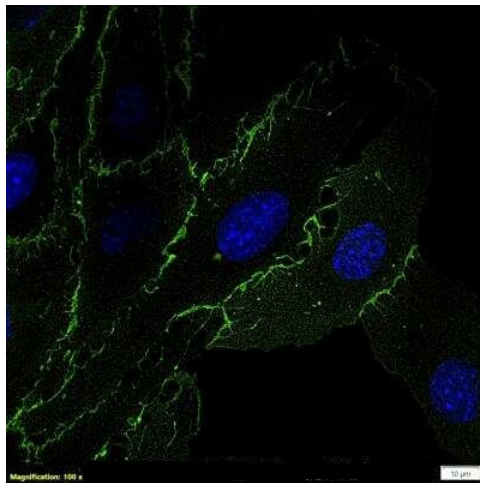
Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - Mouse MS1 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD31/PECAM-1 Antibody [MEC13.3] conjugated to Alexa Fluor 647 (TA336675AF647) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



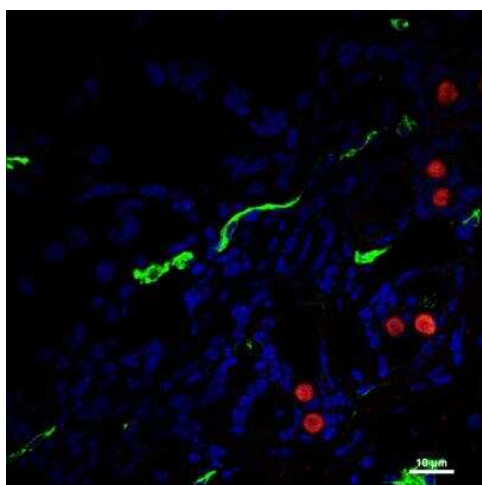
Flow Cytometry: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - A surface stain was performed on MS-1 cells with CD31/PECAM-1 Antibody (MEC13.3) (TA336675AF647, blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 5 ug/mL for 20 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.



Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - MS1 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton-X100. The cells were incubated with at 5.0 ug/ml overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



Immunocytochemistry/Immunofluorescence: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - Mouse MS1 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD31/PECAM-1 Antibody [MEC13.3] (TA336675) at 1 ug/ml overnight at 4C and detected with an anti-rat DyLight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



Immunohistochemistry-Frozen: CD31/PECAM-1 Antibody (MEC13.3) TA336675 - 4T1 tumor sections were stained for CD31 (green) and CD105 (red).