Product Datasheet

CD31/PECAM-1 Antibody (JC/70A) - BSA Free
NB600-562-0.1ml

Unit Size: 0.1 ml

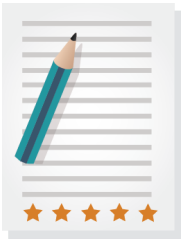
Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. After opening store under sterile conditions.

www.novusbio.com technical@novusbio.com

Reviews: 4 Publications: 54

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB600-562

Updated 10/23/2024 v.20.1



NB600-562-0.1ml

CD31/PECAM-1 Antibody (JC/70A) - BSA Free

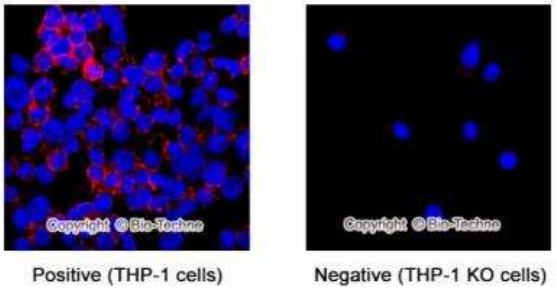
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. After opening store under sterile conditions.
Clonality	Monoclonal
Clone	JC/70A
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	82.5 kDa

Product Description	
Host	Mouse
Gene ID	5175
Gene Symbol	PECAM1
Species	Human, Mouse, Feline, Rabbit
Reactivity Notes	Rabbit (PMID: 21533193) and Mouse (PMID: 29700126) reactivity reported in scientific literature.
Immunogen	This CD31/PECAM-1 Antibody (JC/70A) was developed against a membrane preparation of a spleen from a patient with hairy cell leukemia.

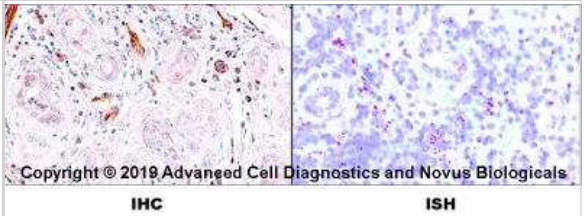
Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry, Flow (Cell Surface), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Dual RNAscope ISH-IHC, Knockout Validated
Recommended Dilutions	Western Blot 1:100-1:500, Flow Cytometry 1:100-1:250, ELISA, Immunohistochemistry 1:10-1:25, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:10-1:25, Immunohistochemistry-Frozen, Flow (Cell Surface) 1:100-1:250, Knockout Validated, Dual RNAscope ISH-IHC
Application Notes	This CD31/PECAM1 Antibody (JC/70A) is useful for IHC on paraffin-embedded sections, Flow cytometry and Western blot. It reacts with an ~100 kDa glycoprotein expressed by endothelial cells and ~130 kDa glycoprotein present in platelets. It stains endothelial cells in normal as well as malignant tissues. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. Use in ELISA reported in scientific literature (PMID: 8307606).

Images

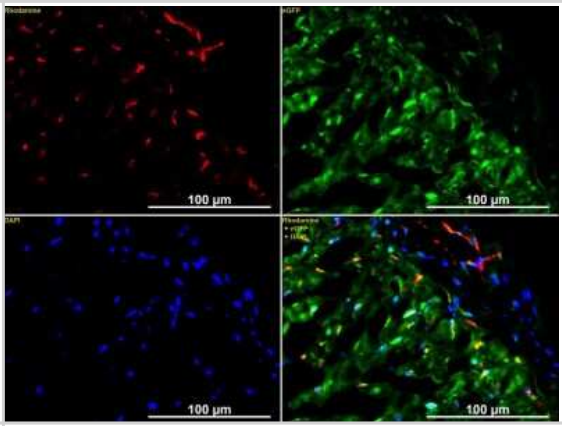
CD31/PECAM-1 was detected in immersion fixed THP-1 (red, positive) but not THP-1 KO (negative) cells using 8 ug/mL Mouse Anti-Human CD31/PECAM-1 (JC/70A) Monoclonal Antibody (Catalog # NB600-562) for 3 hours at room temperature. Cells were stained with the NorthernLights(TM) 557-conjugated Donkey anti-Mouse IgG Secondary Antibody (red, Catalog # NL007)) and and counterstained with DAPI (blue).



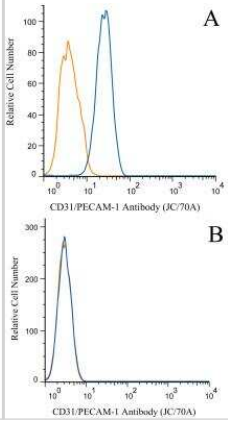
Formalin-fixed paraffin-embedded tissue sections of human metastatic tonsil were probed for CD31 mRNA (ACD RNAScope probe, catalog # 487381; Fast Red chromogen, ACD catalog # 322500). Adjacent tissue section was processes for immunohistochemistry using mouse monoclonal (NB600-562) at 1:25 dilution for 1 hour at room temperature followed by incubation with the anti-mouse IgG VisUCyte HRP Polymer Antibody (Catalog # VC001) and DAB chromogen (yellow-brown). Tissue was counterstained with hematoxylin (blue).



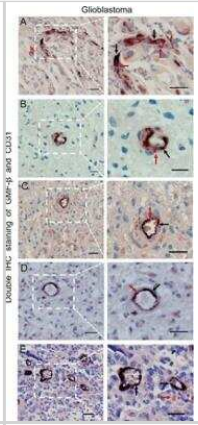
Rabbit Heart, CD31 Stained Red. Image from verified customer review.



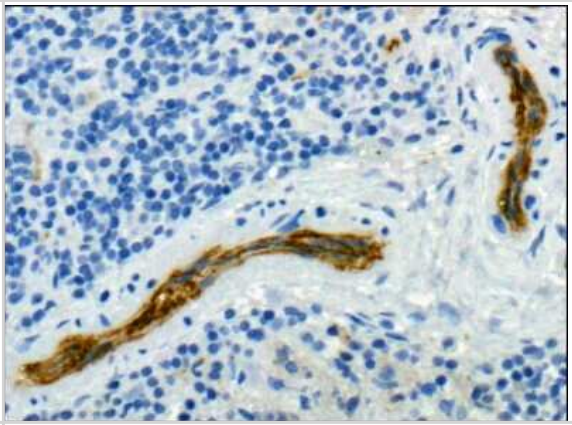
A cell surface stain was performed on HUVEC cells with (NB600-562, blue) along with a matched isotype control NBP2-27287 (orange). Cells were incubated in an antibody dilution of 1:100 for 20 minutes at RT. (Panel A). A negative control (HeLa cells) was also stained to ensure antibody specificity (Panel B).



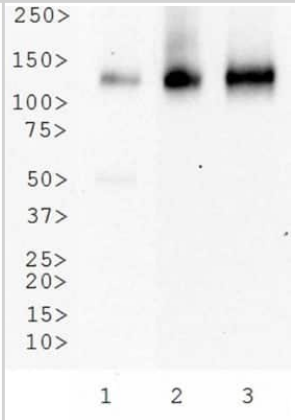
GMF-beta is involved in neovasculogenesis in human glioblastoma. A. Co-expression of GMF-beta and CD31/PECAM-1 in several tumor cells. B. The GMF-beta+/CD31+ incomplete microvessel-like structure in hypovascular zones. C. GMF-beta+/CD31+ immature microvessel in hypovascular zones. D. Single GMF-beta+/CD31+ mature microvessel in vascularized areas. E. GMF-beta-/CD31+ mature microvessels in vascularized areas. Red arrows denote GMF-beta staining, black arrows indicate CD31/PECAM-1 staining. Scale bar: 50 um. Image collected and cropped by CiteAb from the following publication (https://www.oncotarget.com/abstract/5509), licensed under a CC-BY license.



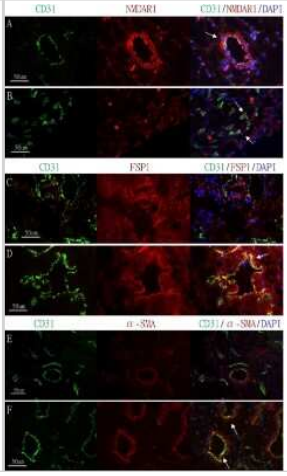
Analysis of CD31/PECAM1 in human spleen using DAB with hematoxylin counterstain.

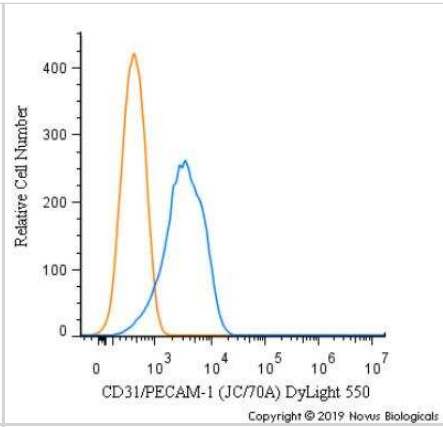
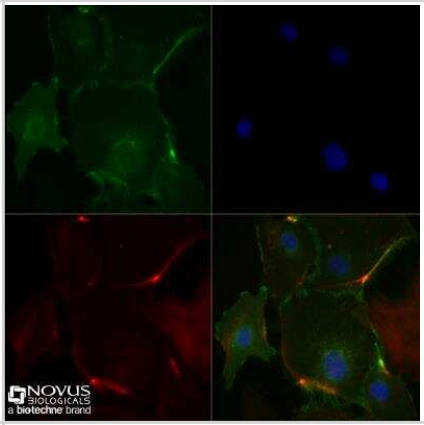
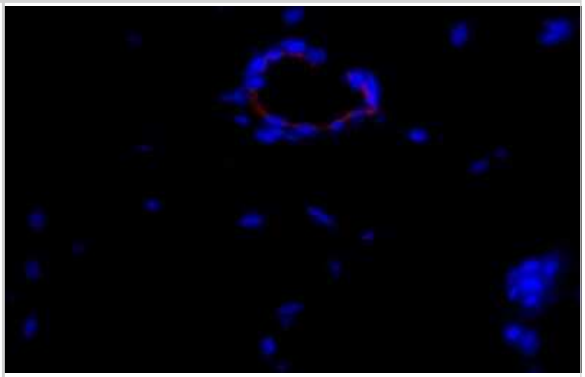
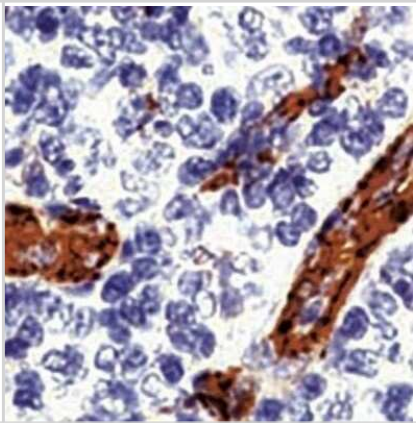


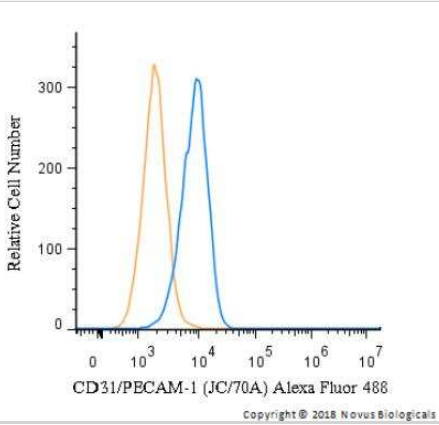
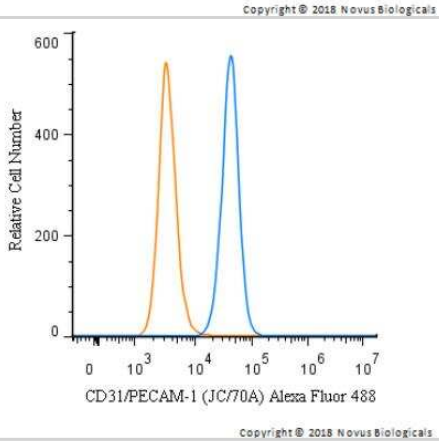
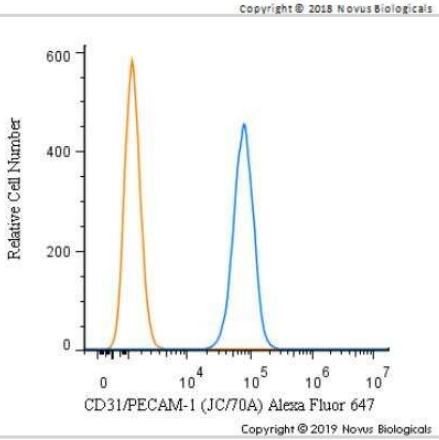
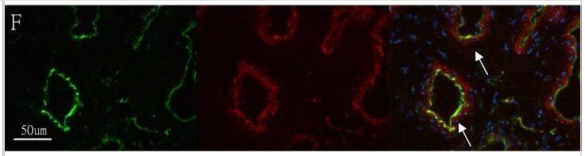
Analysis of CD31/PECAM1 expression in 1) Jurkat whole cell lysate, 2) human platelet lysate and 3) U937 whole cell lysate.

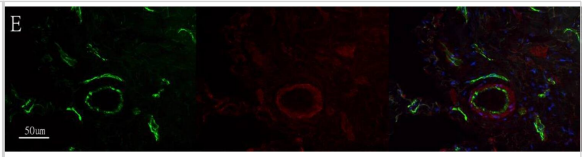
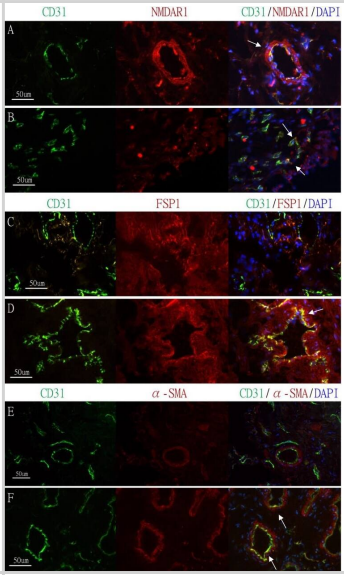
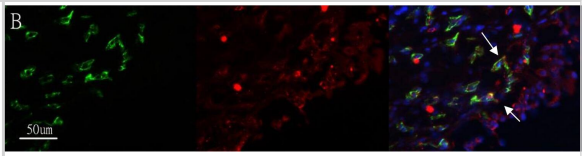


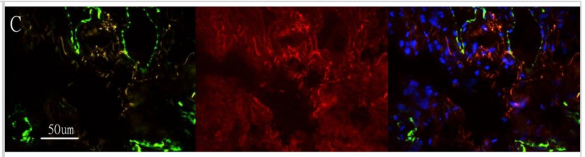
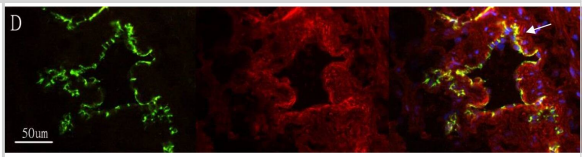
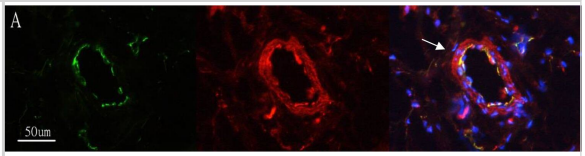
Comparison of the expression of NMDAR1 on vessels and EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects and (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) and NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 and NMDAR1 was evident in two groups (yellow, denoted by white arrows). (CF) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) and two mesenchymal markers: FSP1 (red, in panels C and D) and -SMA (red, in panels E and F); DAPI was used as a nuclear stain (blue); co-expression of CD31 and FSP1 or -SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 m). Microvascular Injury in Ketamine-Induced Bladder Dysfunction. *PLoS One* (2016)



A surface stain was performed on Jurkat cells with the Dylight 550 conjugate of CD31/PECAM-1 Antibody (JC/70A) (NB600-562R, 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 DyLight 550.	
HUVEC cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with CD31/PECAM-1 Antibody (JC/70A) at 2 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.	
Imaging of Feline Endothelial cells with antibody dilution of 1:25. CD31/PECAM-1 (Red), DAPI (Blue). This image was submitted via customer Review.	
FFPE human tonsil stained with CD31/PECAM-1 Antibody (JC/70A).	

A cell surface stain was performed on Jurkat cells with the Alexa Fluor 488 conjugate of CD31/PECAM-1 Antibody (JC/70A) (NB600-562AF488, blue) along with a matched isotype control. Cells were incubated in an antibody dilution of 10 ug/ml for 20 minutes at RT. Both antibodies were conjugated to Alexa Fluor 488.	
A cell surface stain was performed on THP-1 cells with the Alexa Fluor 488 conjugate of CD31/PECAM-1 Antibody (JC/70A) NB600-562AF488 (blue) along with a matched isotype control. Cells were incubated in an antibody dilution of 5 ug/ml for 20 minutes at RT. Both antibodies were conjugated to Alexa Fluor 488.	
A surface stain was performed on THP-1 cells with the Alexa Fluor 647 conjugate of CD31/PECAM-1 Antibody (JC/70A) (NB600-562AF647, 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. Both antibodies were conjugated to Alexa Fluor 647.	
Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: CD31/PECAM-1 Antibody (JC/70A) - BSA Free [NB600-562] - Immunohistochemial comparison of the expression of NMDAR1 on vessels & EndoMT markers in the urinary bladder.Biopsy specimens of frozen sections from the urinary bladders of (A, C, E) normal control subjects & (B, D, F) KC patients. (A, B) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & NMDAR1 (red); DAPI was used as a nuclear stain (blue); co-expression of CD31 & NMDAR1 was evident in two groups (yellow, denoted by white arrows). (C–F) Double-immunofluorescence staining with antibody to endothelial marker CD31 (green) & two mesenchymal markers: FSP1 (red, in panels C & D) & α-SMA (red, in panels E & F); DAPI was used as a nuclear stain (blue); co-expression of CD31 & FSP1 or α-SMA was evident in three groups (yellow, denoted by white arrows) (white bars: 50 μm). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27529746), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Richard J. Jabbour, Thomas J. Owen, Pragati Pandey, Marina Reinsch, Brian Wang, Oisín King, Liam Steven Couch, Dafni Pantou, David S. Pitcher, Rasheda A. Chowdhury, Fotios G. Pitoulis, Balvinder S. Handa, Worrapong Kit-Anan, Filippo Perbellini, Rachel C. Myles, Daniel J. Stuckey, Michael Dunne, Mayooran Shanmuganathan, Nicholas S. Peters, Fu Siong Ng, Florian Weinberger, Cesare M. Terracciano, Godfrey L. Smith, Thomas Eschenhagen, Sian E. Harding In vivo grafting of large engineered heart tissue patches for cardiac repair JCI Insight 2021-08-09 [PMID: 34369384]

Rosalia Lira, César Luna-Rivero, Francina Valezka Morales-Bolaños, José Luis Sandoval-Gutiérrez, Elsa Romelia Moreno-Verduzco, Angélica Maldonado-Rodriguez, Jesús Miguel Torres-Flores, Martha Yocupicio-Monroy, Edgar E. Sevilla-Reyes Case Report of a Young Adult with Fatal COVID-19 and Abundant SARS-CoV-2 Nucleocapsid Protein and Lipofuscin Accumulation in Tissues Heliyon 2023-12-10 [PMID: 38173536]

Sewoom Baek, Hyun-Su Ha, Jeong Su Park, Min Jeong Cho, Hye-Seon Kim, Seung Eun Yu, Seyong Chung, Chansik Kim, Jueun Kim, Ji Youn Lee, Yerin Lee, Hyunjae Kim, Yujin Nam, Sungwoo Cho, Kyubae Lee, Ja Kyung Yoon, Jin Sub Choi, Dai Hoon Han, Hak-Joon Sung Chip collection of hepatocellular carcinoma based on O 2 heterogeneity from patient tissue Nature Communications 2024-06-15 [PMID: 38879551]

Lee M, Kim H, Kwak I et al. Immunohistochemical Analysis of Postburn Scars following Treatment Using Dermal Substitutes Analytical Cellular Pathology 2022-02-25 [PMID: 35251908]

Raghavan S, Kenchappa DB,Leo MD SARS-CoV-2 Spike Protein Induces Degradation of Junctional Proteins That Maintain Endothelial Barrier Integrity Frontiers in cardiovascular medicine 2021-06-11 [PMID: 34179146]

Zhang K, Jin D, Zhao X et al. HIF-1?-Induced Mitophagy Regulates the Regenerative Outcomes of Stem Cells in Fat Transplantation Cell transplantation 2023-11-27 [PMID: 38009534] (IHC, Mouse)

Hun Kim J, Liu Q, Lee U et al. Antioxidant-Coated multifunctional whitlockite scaffold for the treatment of Steroid-Induced osteonecrosis of the femoral head Chemical Engineering Journal 2023-10-01 (IHC, Rabbit)

Zheng M, Wang Y, Fu F et al. Radioimmunotherapy Targeting B7-H3 in situ glioma models enhanced antitumor efficacy by Reconstructing the tumor microenvironment International Journal of Biological Sciences 2023-08-15 [PMID: 37705739] (Immunocytochemistry/ Immunofluorescence)

Dhumale P, Nielsen JV, Hansen ACS et al. CD31 defines a subpopulation of human adipose-derived regenerative cells with potent angiogenic effects Sci Rep 2023-09-01 [PMID: 37658225] (Immunocytochemistry/ Immunofluorescence)

Ball EE, Weiss CM, Liu H et al. Severe Acute Respiratory Syndrome Coronavirus 2 Vasculopathy in a Syrian Golden Hamster Model The American journal of pathology 2023-03-10 [PMID: 36906263] (IHC-Fr, Human)

Details:
1:20 Dilution

Chung S, Kim S, Lee K et al. In Situ Reprogrammings of Splenic CD11b + Cells by Nano?Hypoxia to Promote Inflamed Damage Site?Specific Angiogenesis Advanced Functional Materials 2023-05-01

Brady EL, Prado O, Johansson F et al. Engineered tissue vascularization and engraftment depends on host model Scientific reports 2023-02-03 [PMID: 36737618] (IHC-WhMt)

More publications at http://www.novusbio.com/NB600-562

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NB600-562-0.1ml

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
NBP2-54655PEP	CD31/PECAM-1 Recombinant Protein Antigen

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB600-562

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications