Product Datasheet

CD34 Antibody (MEC 14.7) - BSA Free
NB600-1071

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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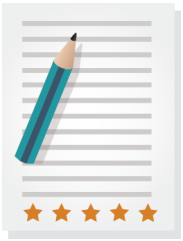
Updated 2/21/2025 v.20.1



NB600-1071

CD34 Antibody (MEC 14.7) - BSA Free

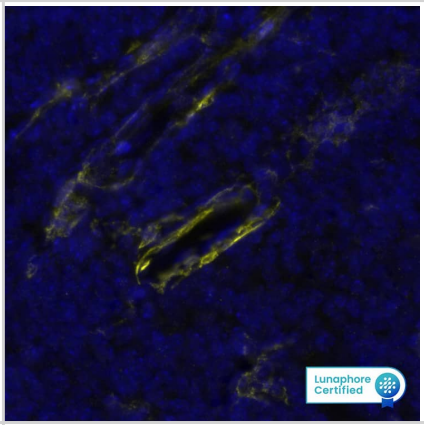
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	MEC 14.7
Preservative	0.02% Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	PBS

Product Description	
Host	Rat
Gene ID	947
Gene Symbol	CD34
Species	Mouse, Human (Negative)
Reactivity Notes	This antibody does not detect Human CD34 and is an excellent tool for marking host derived endothelial cells/vasculature in human cancer xenografts on mouse.
Marker	Hematopoietic Stem Cell Marker
Immunogen	Murine transformed endothelioma cell line t-end.

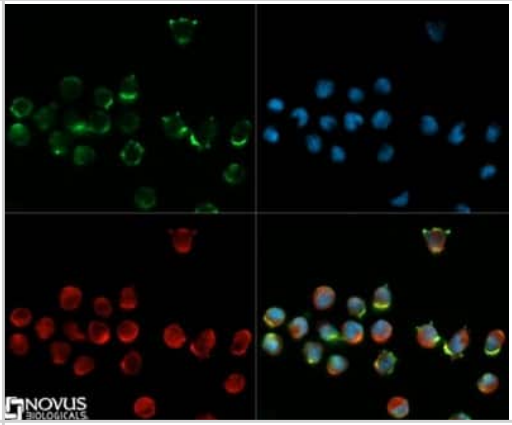
Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Multiplex Immunofluorescence
Recommended Dilutions	Western Blot 1:250, Flow Cytometry 1 ug per million cells, ELISA 1:100-1:2000, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence 1:100 -1:1000, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen 1:100, Multiplex Immunofluorescence 1:500
Application Notes	This CD34 (MEC 14.7) antibody is useful for Immunohistochemistry (on both paraffin-embedded and frozen sections), Flow Cytometry, Immunocytochemistry/Immunofluorescence, Western blot, Immunoprecipitation and ELISA. Antigen retrieval is required for IHC-Paraffin.

Images

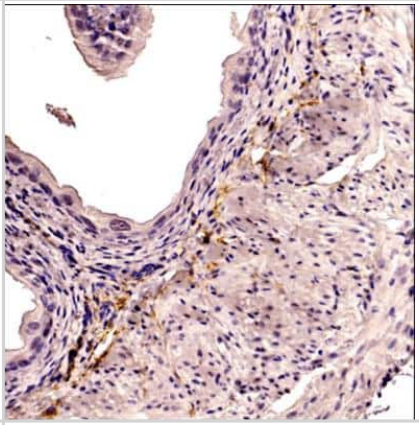
CD34 was detected in immersion fixed paraffin-embedded sections of mouse Thymus using Rat Anti-Mouse CD34, Monoclonal Antibody (Catalog #NB600-1071) at 1:500 dilution at 37 ° Celsius for 2 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9; Epredia Catalog # TA-999-DHBH).Tissue was stained using the Alexa Fluor™ 647 Goat anti-Rat IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647RT) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the membrane. Protocol available in COMET™ Panel Builder.



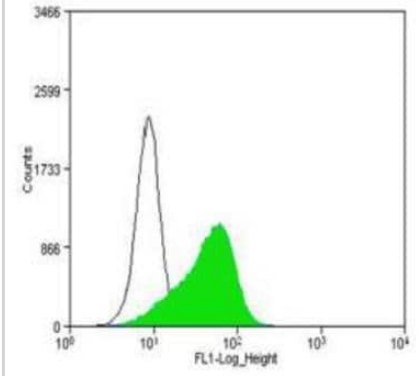
Immunocytochemistry/Immunofluorescence: CD34 Antibody (MEC 14.7) [NB600-1071] - CD34 antibody was tested in WEHI-3 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



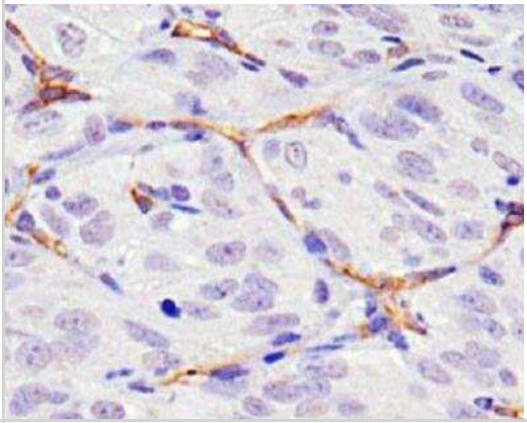
Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a FFPE tissue section of mouse small intestine using rat anti-mouse CD34 (clone MEC 14.7) at 1:100 dilution. The signal was developed using HRP-conjugated anti-rat secondary with DAB reagent which followed counterstaining of nuclei using hematoxylin. This antibody specifically labelled the endothelial cells in blood vessels located primarily in the sub-mucosa, and of that of the mucosa muscularis and the mucosal lacteal.



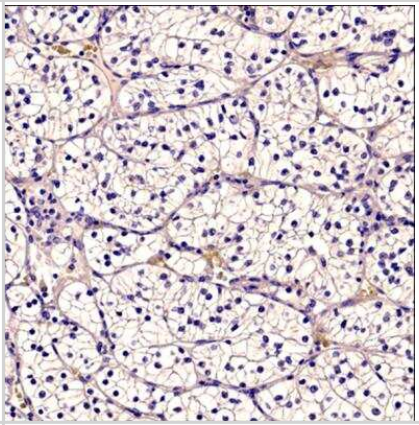
Flow Cytometry: CD34 Antibody (MEC 14.7) [NB600-1071] - CD34 (MEC 14.7) antibody was tested at 1:250 in WEHI-3 cells with DyLight 488 (green) alongside a matched isotype control (black).



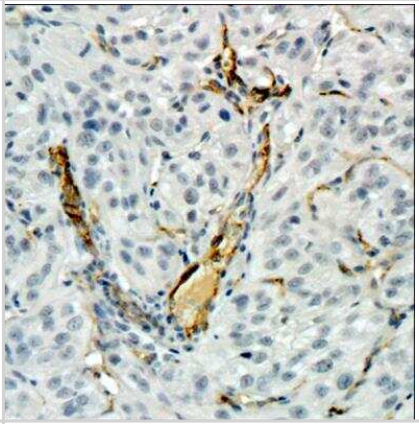
Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of CD34 on human renal cancer xenograft using CD34 antibody (clone MEC 14.7). The antibody detected the endothelial cells in the tumor vasculature which are originating from the host (mouse).



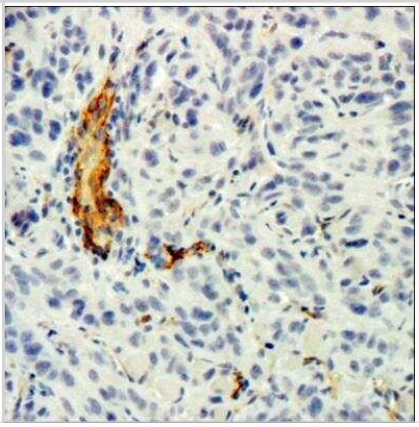
Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a human renal cancer tissue section using CD34 antibody (clone MEC 14.7) at 1:100 dilution. The antibody did not detect human CD34 which is an expected outcome for this clone. This section was included in NB600-1071's IHC validation testing as a negative control.

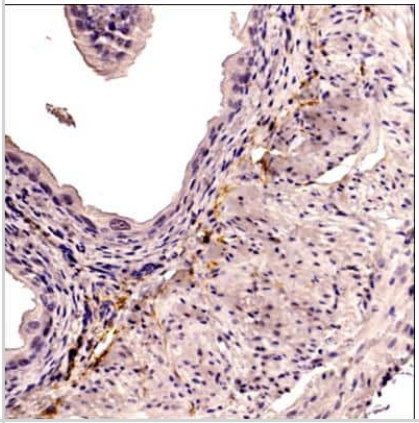
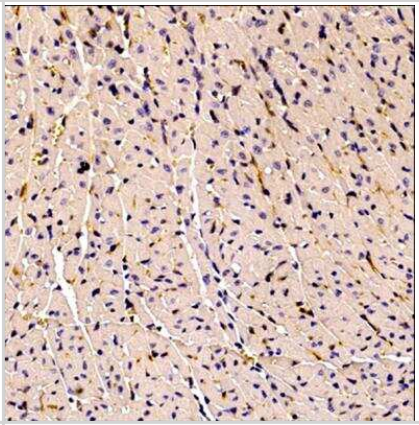
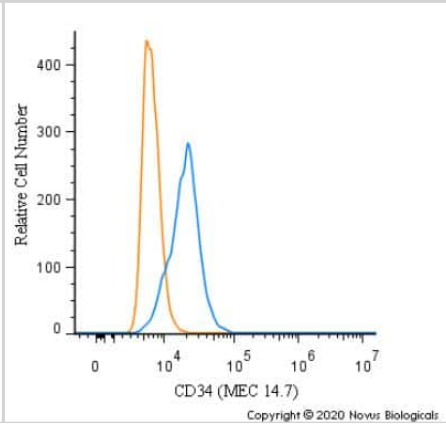


Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a FFPE tissue section of human renal cancer xenograft using CD34 antibody clone MEC 14.7 at 1:100 dilution. The signal was developed using HRP-conjugated secondary antibody and DAB reagent followed by counterstaining of nuclei with hematoxylin. Notably, the antibody specifically stained the endothelial cells of the tumor vasculature which is originating from the host animal cells (mouse). This observation was verified by including a negative control in this validation testing (see the IHC image of human renal cancer tissue section with negative signal for CD34).



Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a FFPE tissue section of human renal cancer xenograft using CD34 antibody (clone MEC 14.7) at 1:100 dilution. The staining was detected using HRP-conjugated secondary antibody and DAB reagent followed by counterstaining of nuclei with hematoxylin. Note that this murine CD34 specific antibody stained only the endothelial cells of the tumor vasculature which is originating from the host animal cells (mouse). This observation was verified by including a negative control in this validation testing (see the IHC image of human renal cancer tissue section with negative signal for CD34).



Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a FFPE tissue section of mouse colon using rat anti-mouse CD34 (clone MEC 14.7) at 1:100 dilution. The signal was developed using HRP-conjugated anti-rat secondary with DAB reagent which followed counterstaining of nuclei using hematoxylin. The antibody specifically generated a staining of the endothelial cells in blood vessels of the colon.	
Immunohistochemistry-Paraffin: CD34 Antibody (MEC 14.7) [NB600-1071] - Analysis of a FFPE tissue section of mouse heart using rat anti-mouse CD34 (clone MEC 14.7) at 1:100 dilution. The signal was developed using HRP-conjugated anti-rat secondary with DAB reagent which followed counterstaining of nuclei using hematoxylin. The antibody specifically generated a staining of the endothelial cells in blood vessels of the heart tissue.	
Flow Cytometry: CD34 Antibody (MEC 14.7) [NB600-1071] - An intracellular stain was performed on Raw264.7 cells with CD34 Antibody [MEC 14.7] NB600-1071 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 488 (SA5-10018, Thermo Fisher).	

Publications

Li B, Luan S, Chen J et al. The MSC-Derived Exosomal lncRNA H19 Promotes Wound Healing in Diabetic Foot Ulcers by Upregulating PTEN via MicroRNA-152-3p Molecular Therapy - Nucleic Acids 2020-03-06 [PMID: 31958697] (Flow Cytometry)

Celikten M, Sahin H, Senturk GE et al. The Effect of Platelet-Rich Fibrin, Platelet-Rich Plasma, and Concentrated Growth Factor in the Repair of Full Thickness Rotator Cuff Tears Journal of shoulder and elbow surgery 2023-10-26 [PMID: 37898418] (IHC-P, Rabbit)

Wang T, Bai J, Lu M et al. Engineering immunomodulatory and osteoinductive implant surfaces via mussel adhesion-mediated ion coordination and molecular clicking Nature Communications 2022-01-10 [PMID: 35013289] (Flow Cytometry)

Sakurai R, Liu J, Wang Y et al. Prevention of perinatal nicotine-induced bone marrow mesenchymal stem cell myofibroblast differentiation by augmenting the lipofibroblast phenotype Clin Sci (Lond) 4338-01-01 [PMID: 30309879] (FLOW)

Liu Y, Zhou Y. Circ_0087960 stabilizes KDM5B by reducing SKP2 mediated ubiquitination degradation and promotes osteogenic differentiation in periodontal ligament stem cells Regen Ther 2022-03-01 [PMID: 35229010] (FLOW, Human)

Details:
Citation using the FITC version of this antibody.

Fjaestad KY, Romer AMA, Goitea V et al. Blockade of beta-adrenergic receptors reduces cancer growth and enhances the response to anti-CTLA4 therapy by modulating the tumor microenvironment Oncogene 2022-01-11 [PMID: 35017664] (IHC-P, Mouse)

Lynch Em, Robertson S, Fitzgibbons C Et Al. Transcriptome analysis using patient iPSC-derived skeletal myocytes: Bet1L as a new molecule possibly linked to neuromuscular degeneRation in ALS Experimental neurology 2021-07-23 [PMID: 34310943]

Costa B, Fletcher MNC, Boskovic P, et al. A Set of Cell Lines Derived from a Genetic Murine Glioblastoma Model Recapitulates Molecular and Morphological Characteristics of Human Tumors Cancers 2021-01-10 [PMID: 33435218] (IHC-P, Mouse)

Sorensen EM Plasma-derived exosomes as potential biomarkers for pediatric acute leukemia. Thesis 2020-01-01 (WB, Human)

Details:
Exosomes from human plasma samples underwent Western blot analysis.

Zhou C, Zhou L, Liu J et al. Kidney extracellular matrix hydrogel enhances therapeutic potential of adipose-derived mesenchymal stem cells for renal ischemia reperfusion injury Acta Biomater 2020-08-06 [PMID: 32771597]

Braun RK, Chetty C, Balasubramaniam V, et al Intraperitoneal injection of MSC-derived exosomes prevent experimental bronchopulmonary dysplasia. Biochem Biophys Res Commun. 2018 Aug 07 [PMID: 30093115] (Flow, Rat)

Kolb R, Kluz P, Tan ZW et al. Obesity-associated inflammation promotes angiogenesis and breast cancer via angiopoietin-like 4 Oncogene 2018-12-05 [PMID: 30518876] (IHC-Fr, Mouse)

More publications at http://www.novusbio.com/NB600-1071

Procedures

IHC Protocol Specific for CD34 Antibody (MEC 14.7) - Hematopoietic Stem Cell Marker

Immunohistochemistry-paraffin embedded sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer pH 6.0 then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench top for 30 minutes.

Staining:
1. Wash sections in dH2O three times for 5 minutes each.
2. Wash section in wash buffer (1X PBS/0.1% Tween-20 (1X PBST)) for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1X PBST, 5% goat serum) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul primary antibody diluted in 1X PBST, 5% goat serum to each section. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated secondary antibody, diluted in 1X PBST, 5% goat serum. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Striptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in dH2O.
12. Counterstain sections in hematoxylin.
13. Wash sections in dH2O two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

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Products Related to NB600-1071

HAF005	Goat anti-Rat IgG Secondary Antibody [HRP]
F0105B	Goat anti-Rat IgG Secondary Antibody [Phycoerythrin]
NBP2-21947-0.1mg	Rat IgG2a Isotype Control (2A3)
NB600-1071G	CD34 Antibody (MEC 14.7) [DyLight 488]

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.

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