Human CD31/PECAM-1 Antibody

Monoclonal Rabbit IgG Clone # 3179D
Catalog Number: MAB11678

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD31/PECAM-1 protein in direct ELISA.
Source	Monoclonal Rabbit IgG Clone # 3179D
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human CD31/PECAM-1 Gln28-Lys601 Accession # P16284
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

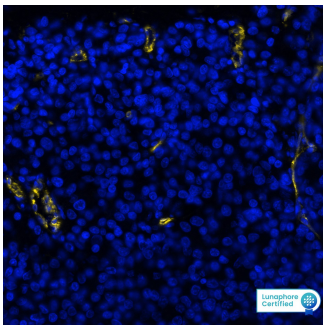
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	THP-1 human acute monocytic leukemia cell line
Immunocytochemistry	1-10 µg/mL	Immersion fixed HUVEC human umbilical vein endothelial cells.
Multiplex Immunofluorescence	8 µg/mL	Immersion fixed paraffin-embedded sections of human Prostate Cancer
Immunohistochemistry	1-10 µg/mL	Immersion fixed paraffin-embedded sections of human colon and human kidney

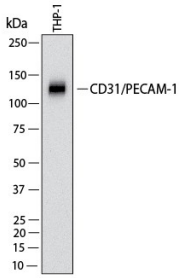
DATA

Multiplex Immunofluorescence



Detection of CD31 in Human Prostate Cancer via seqIF™ staining on COMET™ CD31 Antibody was detected in immersion fixed paraffin-embedded sections of human Prostate Cancer using Rabbit Anti-Human CD31, Monoclonal Antibody (Catalog #MAB11678) at 8ug/mL 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™ Plus 555 Goat anti-Rabbit IgG Secondary Antibody at 1:100 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR555RB) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the membrane of endothelial cells. Protocol available in COMET™ Panel Builder.

Western Blot



Detection of Human CD31/PECAM-1 by Western Blot. Western Blot shows lysates of THP-1 human acute monocytic leukemia cell line. PVDF membrane was probed with 1 µg/ml of Rabbit Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # MAB11678) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for CD31/PECAM-1 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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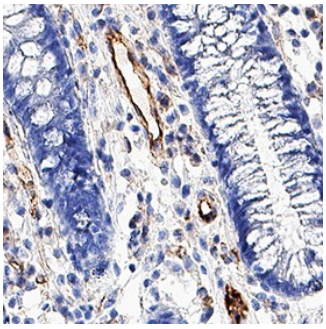
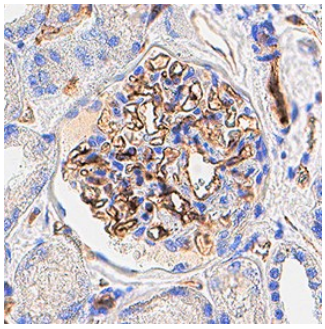
Immunohistochemistry



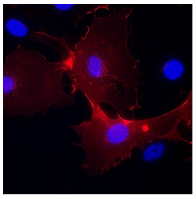
Detection of CD31/PECAM-1 in Human Colon. CD31/PECAM-1 was detected in immersion fixed paraffin-embedded sections of human colon using Rabbit Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # MAB11678) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the membrane. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Immunohistochemistry

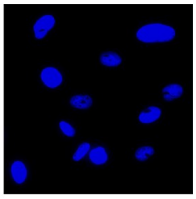


Detection of CD31/PECAM-1 in Human Kidney. CD31/PECAM-1 was detected in immersion fixed paraffin-embedded sections of human kidney using Rabbit Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # MAB11678) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the membrane. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Immunocytochemistry



Positive (HUVEC cells)



Negative (U-251 cells)

Detection of CD31/PECAM-1 in HUVEC cells CD31/PECAM-1 was detected in immersion fixed HUVEC human umbilical vein endothelial cells (Positive) and absent in U251-MG human malignant glioblastoma cell line (Negative) using Rabbit Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # MAB11678) at 3 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to the cell membrane. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The CD31 adhesion molecule, also known as PECAM-1, is expressed in large amounts on endothelial cells at intercellular junctions and on T cell subsets, and to a lesser extent on platelets and most other leukocytes such as monocytes and neutrophils. CD31 binds to itself homotypically, and also to the leukocyte integrin αvβ3 heterotypically. CD31 is required for the transendothelial migration of leukocytes through intercellular junctions of vascular endothelial cells. CD31 has been found in human plasma, and the presence of this circulating isoform is suggested to modulate the transendothelial migration of leukocytes.

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China | info.cn@bio-techne.com TEL: 400.821.3475