

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD31/PECAM-1. In Western blots, no cross-reactivity with recombinant human (rh) E-Selectin, rhICAM-1, -2, -3, rhVCAM-1, or recombinant mouse VCAM-1 was observed.
Source	Monoclonal Mouse IgG ₁ Clone # 9G11
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Activated HUVEC human umbilical vein endothelial cells
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

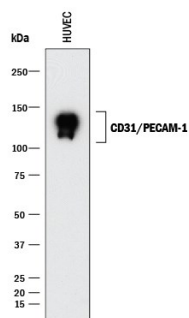
APPLICATIONS

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	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of Artery in Human Liver
Knockout Validated	CD31/PECAM-1 was detected in immersion fixed THP-1 human acute monocytic leukemia cell line but is not detected in CD31/PECAM-1 knockout (KO) THP-1 human cell line.	
Immunoprecipitation	Lampugnani, M.G. <i>et al.</i> (1992) J. Cell Biol. 118 :1511.	

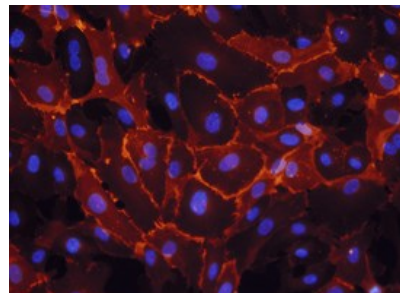
DATA

Western Blot



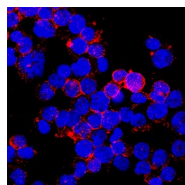
Detection of Human CD31/PECAM-1 by Western Blot. Western blot shows lysates of HUVEC human umbilical vein endothelial cells. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # BBA7) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for CD31/PECAM-1 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry

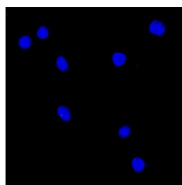


CD31/PECAM-1 in HUVEC Human Cells. CD31/PECAM-1 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using 10 µg/mL Mouse Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # BBA7) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Knockout Validated



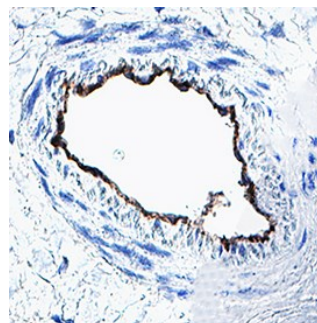
Positive (THP-1 cells)



Negative (THP-1 KO cells)

CD31/PECAM-1 Specificity is Shown by Immunocytochemistry in Knockout Cell Line. CD31/PECAM-1 was detected in immersion fixed THP-1 human acute monocytic leukemia cell line but is not detected in CD31/PECAM-1 knockout (KO) THP-1 human cell line using Mouse Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # BBA7) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cell membrane. Staining was performed using our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

Immunohistochemistry



Detection of CD31/PECAM-1 in Artery in Human Liver. CD31/PECAM-1 was detected in immersion fixed paraffin-embedded sections of Artery in Human Liver using Mouse Anti-Human CD31/PECAM-1 Monoclonal Antibody (Catalog # BBA7) at 10 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). 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 endothelial cells. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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.