# biotechne

## Human CD31/PECAM-1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG Catalog Number: AF806

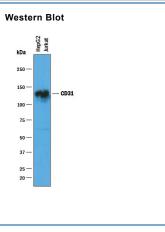
**R**Dsystems

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human CD31 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse CD31 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CD31 Extracellular domain
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

### APPLICATIONS

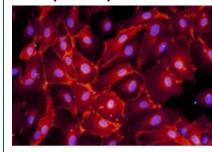
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website. Recommended Sample Concentration Western Blot See Below 1 µg/mL Immunocytochemistry 5-15 µg/mL See Below Immunohistochemistry 5-25 µg/mL Immersion fixed paraffin-embedded sections of human liver Simple Western 10 µg/mL See Below 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.

DATA



Detection of Human CD31/PECAM-1 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human CD31/PECAM-1 Antigen Affinitypurified Polyclonal Antibody (Catalog # AF806) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). 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 HUVECs. CD31/PECAM-1 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using 10 µg/mL Sheep Anti-Human CD31/PECAM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF806) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # Catalog # NL010) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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# biotechne **R**Dsystems

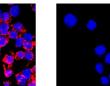
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# Simple Western lurkat lepG2 kDa 230 CD31 40 12

Detection of Human CD31/PECAM-1 by Simple Western<sup>™</sup>. Simple Western lane view shows lysates of Jurkat human acute T cell leukemia cell line and HepG2 human hepatocellular carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for CD31/PECAM-1 at approximately 173-186 kDa (as indicated) using 10 µg/mL of Sheep Anti-Human CD31/PECAM-1 Antigen Affinitypurified Polyclonal Antibody (Catalog # AF806) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

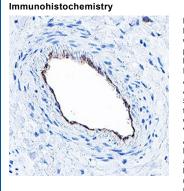
### Knockout Validated



Positive (THP-1 cells)

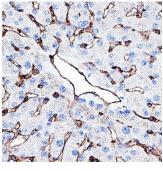
Negative (THP-1 KO cells)

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 Sheep Anti-Human CD31/PECAM-1 Antigen Affinitypurified Polyclonal Antibody (Catalog # AF806) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights<sup>™</sup> 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) 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.



Detection of CD31/PECAM-1 in human liver. CD31/PECAM-1 was detected in immersion fixed paraffin-embedded sections of human liver using Sheep Anti-Human CD31/PECAM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF806) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). 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.





Detection of CD31/PECAM-1 in human liver. CD31/PECAM-1 was detected in immersion fixed paraffin-embedded sections of human liver using Sheep Anti-Human CD31/PECAM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF806) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). 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 and sinusoids. View our protocol for IHC Staining with VisUCvte HRP Polymer Detection Reagents.

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### **RD**SYSTEMS

Image: Control of Human         Image: Control of Human	<ul> <li>Detection or numinic</li> <li>Detection or nummaninic</li> <li>Detection or nummaninic&lt;</li></ul>	Immunocytochemistry/ Immunofluorescence	Defection of Human	
license. Not internally tested by	license. Not internally tested by		Immunocytochemistry/Immuno fluorescence Expression pattern of integrin receptors and type IV collagen in normal pancreatic tissue. A. H&E staining of normal exocrine pancreas with acini structures and a duct in the insert. The area shown is representative for all panels in B. B. Merged immunofluorescence staining of integrin a1, a2, and β1 (in red), and type IV collagen (green in upper row), or the endothelial marker CD31 (green in lower row). Type IV collagen is present in the vascular-, ductal-, and acini- BMs. Integrin a1 is only expressed in endothelial cells and integrin a2 only in the ductal epithelium. Integrin β1 is found in the ductal-, endothelial-, and at the base of the acini-cells. Arrows indicate examples of colocalization. Magnification x40 in all panels. Cell nuclei are stained by DAPI (in blue). Image collected and cropped by CiteAb from the following publication (https://bmccancer.biomedcentral. com/articles/10.1186/1471-2407-	
·····	PREPARATION AND STORAGE		license. Not internally tested by	
			in sterile PBS.	

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.		
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.		
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.		
	<ul> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> </ul>		
	<ul> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>		
	<ul> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>		

### 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 avβ3 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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