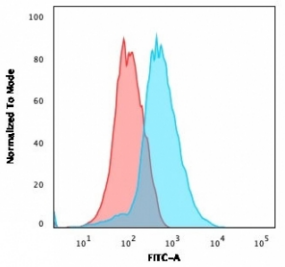
CD31 Antibody PECAM1/3527 / PECAM-1 Monoclonal Antibody [clone PECAM1/3527] (V8257)

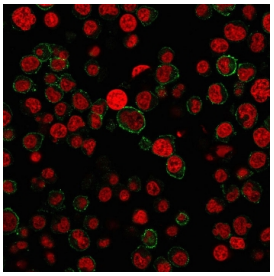
Catalog No.	Formulation	Size
V8257-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8257-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8257SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

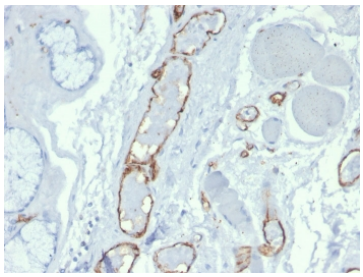
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	PECAM1/3527
Purity	Protein G affinity chromatography
UniProt	P16284
Localization	Cell surface, cytoplasmic
Applications	Flow cytometry: 1-2ug/10^6 cells in 0.1ml Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 1-2ug/ml
Limitations	This CD31 Antibody PECAM1/3527 / PECAM-1 Monoclonal Antibody is available for research use only.



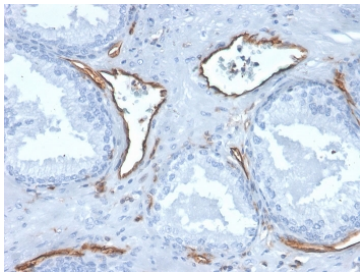
CD31 Antibody PECAM1/3527 in Jurkat Cells by FACS. Flow cytometry analysis of human Jurkat cells using CD31 Antibody clone PECAM1/3527. The CD31 antibody-stained population is shown in blue and the isotype control in red. A clear rightward fluorescence shift is visible relative to the control, demonstrating detection of cell-associated CD31. The distinct separation between the two populations supports recognition of PECAM-1 by this monoclonal antibody and complements the microscopy, tissue and biochemical validation available for clone PECAM1/3527.



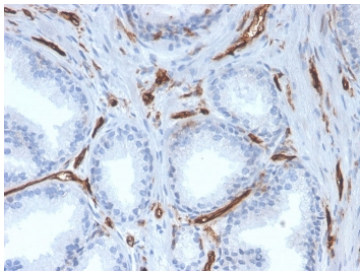
CD31 Antibody PECAM1/3527 in Jurkat Cells by IF. Immunofluorescence analysis of human Jurkat cells using CD31 Antibody clone PECAM1/3527. Green CD31 immunoreactivity is visible predominantly along the cellular periphery, consistent with localization of the transmembrane PECAM-1 protein at the cell surface. Red nuclear counterstaining provides cellular orientation and produces clear contrast with the green antibody signal. The defined peripheral staining pattern provides fluorescence-based validation of this PECAM-1 Monoclonal Antibody and complements the flow cytometry analysis of Jurkat cells.



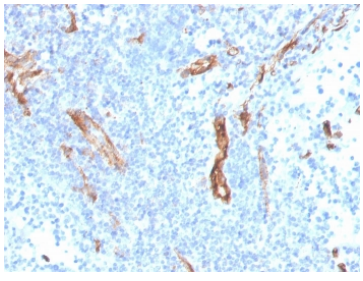
CD31 Antibody PECAM1/3527 in Human Tonsil Vasculature by IHC. Immunohistochemistry of FFPE human tonsil sections using CD31 Antibody clone PECAM1/3527. Strong brown staining distinctly outlines endothelial cells within vascular structures against a predominantly negative hematoxylin-counterstained tissue background. The restricted vascular pattern is consistent with the established endothelial distribution of PECAM-1. HIER was performed by boiling sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min and allowing them to cool before testing.



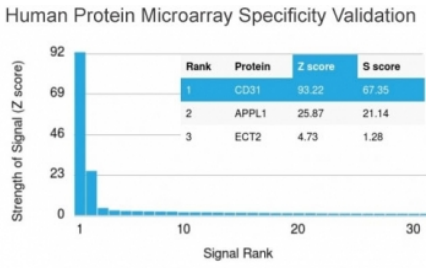
CD31 Antibody PECAM1/3527 in Human Prostate Vascular Endothelium by IHC. Immunohistochemistry of FFPE human prostate sections using CD31 Antibody clone PECAM1/3527. Strong brown immunoreactivity sharply delineates endothelial cells surrounding vascular lumens within the prostate, while adjacent glandular epithelium shows comparatively little staining. HIER was performed by boiling sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min and allowing them to cool before testing. The selective vascular pattern supports detection with the PECAM-1 Monoclonal Antibody.



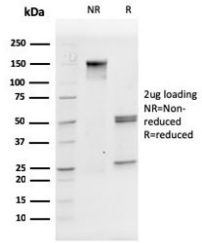
CD31 Antibody PECAM1/3527 in Human Prostate Microvasculature by IHC. Immunohistochemistry of FFPE human prostate sections using CD31 Antibody clone PECAM1/3527. Brown staining highlights numerous small endothelial-lined vascular structures distributed through the stromal regions surrounding the prostate glands. The glandular epithelial structures remain substantially less reactive, producing strong contrast with the CD31-positive microvasculature. HIER was performed in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min. This field further demonstrates endothelial localization of PECAM-1.



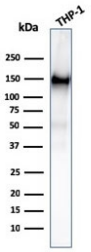
CD31 Antibody PECAM1/3527 in Human Prostate Stromal Vessels by IHC. Immunohistochemistry of FFPE human prostate sections using CD31 Antibody clone PECAM1/3527. Distinct brown immunoreactivity marks endothelial cells within stromal vascular structures, including vessels positioned between and around prostate glands. The surrounding epithelial and stromal tissue provides a comparatively low-staining background, making the vascular distribution readily apparent. HIER was performed in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min. This additional field reinforces the characteristic PECAM-1 endothelial staining pattern.



CD31 Antibody PECAM1/3527 Protein Microarray Validation. Protein microarray analysis of CD31 Antibody clone PECAM1/3527 using a HuProt array containing more than 19,000 full-length human proteins. PECAM1 produced the dominant signal, with a Z-score of approximately 82.4 and an S-score of approximately 27.3. The Z-score represents signal strength in standard deviations above the array mean, while the S-score reflects separation between the intended target and the next-highest signal. The strong preferential recognition of PECAM1 supports the designation of this CD31 Antibody as Protein Microarray Validated.



CD31 Antibody PECAM1/3527 Purity by SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free CD31 Antibody clone PECAM1/3527 under non-reducing (NR) and reducing (R) conditions. The non-reduced sample shows the intact monoclonal antibody predominantly in the expected high molecular weight region, while reduction produces the expected immunoglobulin heavy and light chain components near 50 kDa and 25 kDa. The gel provides confirmation of antibody integrity and purity and complements the experimental validation available for this PECAM-1 Monoclonal Antibody.



CD31 Antibody PECAM1/3527 in THP-1 Cells by WB. Western blot analysis of human THP-1 cell lysate using CD31 Antibody clone PECAM1/3527. A prominent immunoreactive band is visible in the high molecular weight region, consistent with CD31/PECAM-1. Although the unglycosylated protein has a lower calculated molecular weight, endogenous CD31 is extensively glycosylated and is expected to migrate at approximately 83-130 kDa depending on glycosylation state. The observed signal therefore agrees with the characteristic electrophoretic behavior of mature PECAM-1 and provides biochemical validation complementary to the FACS, IF, IHC and protein microarray data.

Description

CD31 Antibody PECAM1/3527 / PECAM-1 Monoclonal Antibody recognizes platelet endothelial cell adhesion molecule 1, a transmembrane glycoprotein encoded by the PECAM1 gene. CD31 is a member of the immunoglobulin superfamily and is strongly associated with vascular endothelial cells. It is also expressed by platelets and several leukocyte populations, making PECAM-1 an important molecule in vascular biology, cell adhesion, immune cell trafficking and hematopoietic research.

PECAM-1 contains six extracellular immunoglobulin-like domains, a single transmembrane region and a cytoplasmic domain containing regulatory tyrosine residues. Homophilic interactions between CD31 molecules contribute to endothelial cell-cell adhesion, particularly at intercellular junctions. The intracellular region participates in phosphorylation-dependent signaling and can interact with signaling proteins that influence cellular responses to mechanical, adhesive and inflammatory stimuli.

CD31 plays an important role in maintaining vascular endothelial integrity and regulating the movement of leukocytes across the endothelium. During inflammation, immune cells migrate through endothelial junctions in a coordinated process involving multiple adhesion molecules. PECAM-1 contributes to this transendothelial migration and has consequently become an important target for studying the relationship between vascular endothelium and immune cell trafficking. A PECAM-1 Monoclonal Antibody can support investigation of these processes and related endothelial signaling mechanisms.

CD31 is also widely used as a marker of vascular endothelial cells. Its expression is frequently examined in studies of angiogenesis, tumor vascularization and vascular development. Assessment of CD31 can help characterize blood vessel distribution, endothelial differentiation and changes in vascular architecture associated with normal physiology and disease. PECAM-1 expression on platelets and selected hematopoietic populations further extends its relevance beyond

endothelial biology.

NSJ Bioreagents offers clone PECAM1/3527 for research into CD31 expression, vascular biology and cellular adhesion. The CD31 Antibody designation reflects the widely recognized cluster of differentiation name, while PECAM-1 Monoclonal Antibody incorporates the protein's platelet endothelial cell adhesion molecule terminology.

A CD31 Antibody provides a reagent for investigating endothelial cells, angiogenesis and vascular organization, while a PECAM-1 Monoclonal Antibody supports research into cell adhesion, vascular integrity and leukocyte trafficking.

This CD31 Antibody is part of our CD Antibodies collection.

Application Notes

Optimal dilution of the CD31 Antibody PECAM1/3527 / PECAM-1 Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 625-738) was used as the immunogen for the CD31 Antibody PECAM1/3527.

Storage

Store the CD31 Antibody PECAM1/3527 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

PECAM-1 antibody, PECAM1 antibody, Platelet Endothelial Cell Adhesion Molecule antibody, EndoCAM antibody, GPIIA' antibody

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