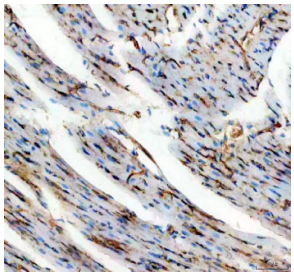
Mouse CD31 Antibody / Rat PECAM-1 Antibody (RQ6065)

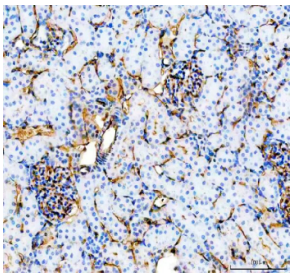
Catalog No.	Formulation	Size
RQ6065	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

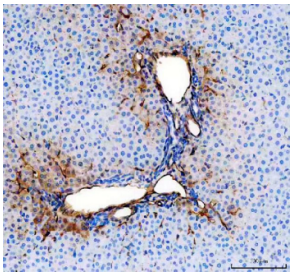
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q08481
Localization	Cell surface and cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This Mouse CD31 Antibody / Rat PECAM-1 Antibody is available for research use only.



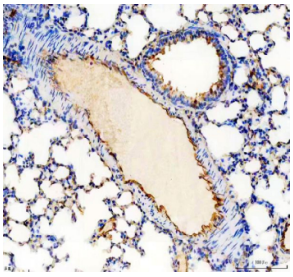
Mouse CD31 Antibody staining of rat cardiac vasculature by IHC.Immunohistochemistry of FFPE rat heart sections using the Mouse CD31 Antibody. Brown DAB staining is visible along vascular and endothelial structures distributed between cardiac muscle fibers, consistent with the vascular localization of CD31/PECAM1. Nuclei are counterstained blue. This Rat PECAM-1 Antibody was tested following heat-induced epitope retrieval by boiling sections in pH 8 EDTA for 20 minutes and allowing them to cool before antibody incubation.



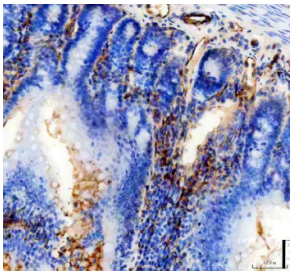
Mouse CD31 Antibody staining of rat kidney vasculature by IHC.Immunohistochemistry of FFPE rat kidney sections using the Mouse CD31 Antibody. Distinct brown staining highlights vascular structures within the renal tissue, with prominent labeling surrounding vessel profiles and comparatively limited staining across much of the surrounding parenchyma. Nuclei are counterstained blue. The Rat PECAM-1 Antibody was tested following heat-induced epitope retrieval by boiling sections in pH 8 EDTA for 20 minutes followed by cooling before antibody incubation.



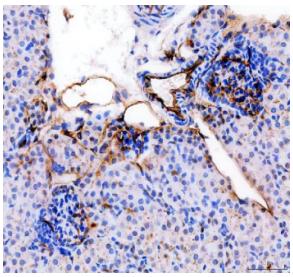
Mouse CD31 Antibody staining of rat hepatic vessels by IHC.Immunohistochemistry of FFPE rat liver sections using the Mouse CD31 Antibody. Brown DAB signal is concentrated around prominent vascular structures, while the surrounding hepatic parenchyma shows substantially less staining. The distribution is consistent with detection of endothelial PECAM1 within the liver vasculature. Nuclei are counterstained blue. Testing of this Rat PECAM-1 Antibody used heat-induced epitope retrieval in pH 8 EDTA for 20 minutes followed by cooling.



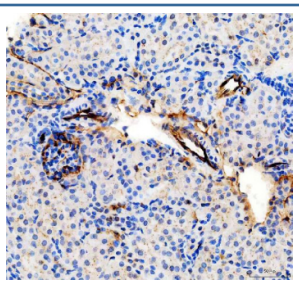
Mouse CD31 Antibody staining of rat pulmonary vasculature by IHC. Immunohistochemistry of FFPE rat lung sections using the Mouse CD31 Antibody. Brown staining is visible along vascular and endothelial profiles within the pulmonary tissue, including structures adjacent to airways and alveolar regions. The staining pattern supports recognition of PECAM1-associated vascular endothelium. Nuclei are counterstained blue. This Rat PECAM-1 Antibody was tested after heat-induced epitope retrieval by boiling sections in pH 8 EDTA for 20 minutes and allowing them to cool.



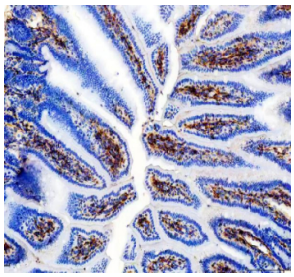
Mouse CD31 Antibody staining of rat intestinal vasculature by IHC. Immunohistochemistry of FFPE rat colon sections using the Mouse CD31 Antibody. Brown DAB staining highlights vascular profiles within the mucosa and supporting tissue, producing a distribution consistent with endothelial CD31/PECAM1 expression. The epithelial architecture remains readily distinguishable with blue nuclear counterstaining. The Rat PECAM-1 Antibody was tested following heat-induced epitope retrieval by boiling sections in pH 8 EDTA for 20 minutes followed by cooling.



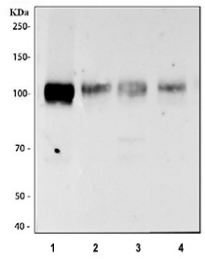
Mouse CD31 Antibody staining of mouse renal microvasculature by IHC. Immunohistochemistry of FFPE mouse kidney sections using the Mouse CD31 Antibody. Strong brown staining outlines vascular structures and capillary profiles within the renal tissue, including prominent labeling associated with glomerular and adjacent vascular compartments. Nuclei are counterstained blue. The observed pattern is consistent with PECAM1 expression in vascular endothelial cells. Heat-induced epitope retrieval was performed by boiling sections in pH 8 EDTA for 20 minutes followed by cooling before testing.



Mouse CD31 Antibody detection of mouse kidney endothelium by IHC. Immunohistochemistry of a second FFPE mouse kidney section using the Mouse CD31 Antibody. Brown DAB signal delineates endothelial structures within the renal parenchyma, including vascular and glomerular-associated profiles, against a predominantly blue nuclear counterstain. This additional field demonstrates PECAM1-associated vascular staining in mouse kidney. Heat-induced epitope retrieval was performed by boiling sections in pH 8 EDTA for 20 minutes and allowing them to cool before antibody incubation.



Mouse CD31 Antibody staining of mouse colon vasculature by IHC. Immunohistochemistry of FFPE mouse colon sections using the Mouse CD31 Antibody. Brown staining is distributed along vascular profiles throughout the intestinal mucosa and supporting tissue, while the glandular architecture is clearly visualized by blue nuclear counterstaining. The pattern is consistent with endothelial PECAM1 localization within the colon. Heat-induced epitope retrieval was performed by boiling sections in pH 8 EDTA for 20 minutes followed by cooling before antibody incubation.



Mouse CD31 Antibody detection of PECAM1 in rat and mouse tissues by WB.Western blot testing of tissue lysates with the Mouse CD31 Antibody. Lane 1: rat lung; lane 2: rat spleen; lane 3: rat heart; lane 4: mouse lung. A prominent immunoreactive band is detected at approximately 100-110 kDa across the tested samples. CD31/PECAM1 has a predicted molecular weight range of approximately 83-130 kDa depending on its level of glycosylation, making the observed migration consistent with the mature glycoprotein. This Rat PECAM-1 Antibody therefore detects a band within the expected size range in rat tissues while also demonstrating recognition of mouse PECAM1 in mouse lung lysate.

Description

Mouse CD31 Antibody / Rat PECAM-1 Antibody recognizes platelet endothelial cell adhesion molecule 1, a transmembrane glycoprotein encoded by the Pecam1 gene. Commonly known as CD31 or PECAM-1, this protein belongs to the immunoglobulin superfamily and is strongly associated with vascular endothelial cells. CD31 is also expressed by platelets and several leukocyte populations, including monocytes, neutrophils and subsets of lymphocytes. Its distribution across vascular and hematopoietic cells has made CD31 an important marker in studies of vascular biology, angiogenesis and immune cell trafficking.

CD31 contains six extracellular immunoglobulin-like domains, a single transmembrane region and a cytoplasmic domain containing regulatory tyrosine residues. Homophilic interactions between PECAM-1 molecules contribute to endothelial cell-cell adhesion and the organization of intercellular junctions. The cytoplasmic region participates in phosphorylation-dependent signaling and can recruit signaling proteins that modulate cellular responses to adhesive, mechanical and inflammatory stimuli. A Mouse CD31 Antibody can therefore support investigation of endothelial organization as well as pathways connecting cell adhesion with intracellular signaling.

PECAM-1 has important functions in maintaining vascular integrity and regulating leukocyte movement across the endothelial barrier. During transendothelial migration, interactions involving CD31 help leukocytes pass through endothelial junctions. The protein is also associated with angiogenic processes, vascular remodeling and responses to changes in blood flow. Because endothelial CD31 outlines vascular structures, it is frequently used to identify blood vessels and investigate changes in vascular density, morphology and organization. A Rat PECAM-1 Antibody provides a complementary reagent for studying these processes in rat experimental models.

CD31 is relevant to research involving inflammation, cardiovascular biology, tumor vascularization, tissue repair and developmental vascular biology. Its combined roles as an endothelial marker, adhesion molecule and signaling receptor make PECAM-1 useful for examining relationships between vascular architecture and immune cell behavior. NSJ Bioreagents provides this rabbit polyclonal reagent for researchers investigating PECAM1 biology. A Mouse CD31 Antibody provides a species-focused tool for studying vascular endothelium and related biological processes, while the Rat PECAM-1 Antibody designation highlights its utility for corresponding rat research models.

For a Protein Microarray Validated monoclonal antibody with CD31 as the primary designation, see our CD31 Antibody PECAM1/3527 / PECAM-1 Monoclonal Antibody.

Application Notes

Optimal dilution of the Mouse CD31 Antibody / Rat PECAM-1 Antibody should be determined by the researcher.

Immunogen

Recombinant mouse protein (amino acids Q41-E258) was used as the immunogen for the Cd31 antibody.

Storage

After reconstitution, the Cd31 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Mouse PECAM1 antibody, Mouse PECAM-1 antibody, Mouse Platelet Endothelial Cell Adhesion Molecule 1 antibody, Rat CD31 antibody, Rat PECAM1 antibody, Rat PECAM-1 antibody

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