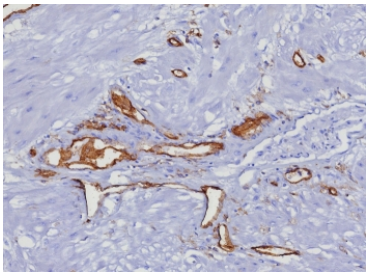
CD31 Antibody / PECAM-1 [clone C31/8377R] (V4541)

Catalog No.	Formulation	Size
V4541-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4541-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4541SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

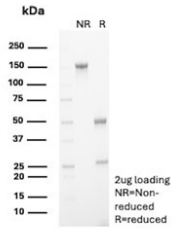
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	C31/8377R
Purity	Protein A/G affinity
UniProt	P16284
Localization	Cell Surface, Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD31 antibody is available for research use only.



Immunohistochemistry analysis of CD31 / PECAM-1 antibody in human uterus. FFPE human uterus tissue was stained with CD31 / PECAM-1 antibody (clone C31/8377R). HRP-DAB brown chromogenic signal is observed predominantly along the endothelial lining of blood vessels within the stromal compartment, with distinct membranous staining outlining vascular lumina. Vascular endothelial cells show strong brown staining, while surrounding smooth muscle bundles and stromal fibroblasts display minimal background signal. Nuclei are counterstained blue. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free CD31 antibody (clone C31/8377R) as confirmation of integrity and purity.

Description

CD31 antibody, also known as PECAM-1 antibody, recognizes Platelet endothelial cell adhesion molecule 1, a transmembrane glycoprotein of the immunoglobulin superfamily encoded by the PECAM1 gene on chromosome 17q23.3. CD31 is predominantly localized to the plasma membrane of vascular endothelial cells, where it is highly concentrated at intercellular junctions. It is also expressed on platelets, monocytes, neutrophils, and certain T cell subsets. As a well-established endothelial marker, CD31 is widely used to identify vascular structures and assess angiogenesis in normal and diseased tissues.

Functionally, PECAM-1 mediates homophilic adhesion between adjacent endothelial cells and facilitates leukocyte transmigration during inflammatory responses. Through its extracellular immunoglobulin-like domains, CD31 supports cell-cell cohesion within the vascular endothelium. Its cytoplasmic tail contains signaling motifs that recruit phosphatases and adaptor proteins, allowing CD31 to participate in mechanotransduction and integrin-associated signaling pathways. CD31 antibody is frequently used to evaluate microvessel density, endothelial activation, and tumor-associated neovascularization.

CD31 also plays an important role in maintaining vascular barrier integrity and regulating platelet-endothelial interactions. By integrating adhesive and signaling functions, PECAM-1 contributes to vascular homeostasis and coordinated immune cell trafficking. Altered expression or distribution of PECAM-1 has been linked to inflammatory vascular disorders, thrombosis, atherosclerosis, and cancer progression. In tumor biology, increased CD31-positive microvessel density often correlates with enhanced angiogenesis and aggressive disease behavior.

CD31 antibody supports research applications focused on vascular biology, immune cell migration, endothelial differentiation, and angiogenesis studies. Recombinant monoclonal clone C31/8377R recognizes PECAM-1 and is suitable for detecting CD31 expression in relevant research applications.

Application Notes

Optimal dilution of the CD31 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 538-738) from the human protein was used as the immunogen for the CD31 antibody.

Storage

Aliquot the CD31 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.