

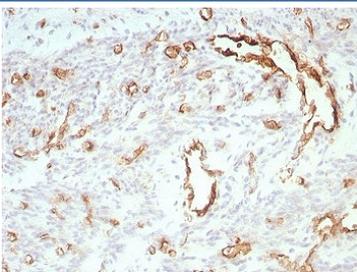
PECAM-1 Antibody / CD31 [clone C31/8828R] (V4544)

Catalog No.	Formulation	Size
V4544-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4544-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4544SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

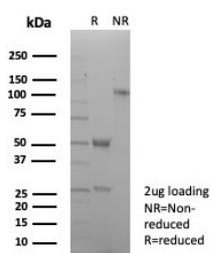
Recombinant **RABBIT MONOCLONAL**

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Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	C31/8828R
Purity	Protein A/G affinity
UniProt	P16284
Localization	Cell Surface, Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This PECAM-1 antibody is available for research use only.



IHC staining of FFPE human uterus tissue with PECAM-1 antibody (clone C31/8828R).
HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free PECAM-1 antibody (clone C31/8828R) as confirmation of integrity and purity.

Description

PECAM-1 antibody, also known as CD31 antibody, recognizes Platelet endothelial cell adhesion molecule 1, a transmembrane glycoprotein of the immunoglobulin superfamily encoded by the PECAM1 gene on chromosome 17q23.3. PECAM-1 is predominantly localized to the plasma membrane of endothelial cells, where it concentrates at intercellular junctions. It is also expressed on platelets, monocytes, neutrophils, and certain lymphocyte subsets. In vascular tissues, PECAM-1 functions as a key structural and signaling component of endothelial junctional complexes.

PECAM-1 mediates homophilic adhesion between adjacent endothelial cells and plays a central role in leukocyte transmigration across the vascular endothelium. During inflammation, PECAM-1 facilitates diapedesis by guiding leukocytes through endothelial junctions. CD31 antibody is widely used in vascular biology and pathology research as a marker of endothelial cells and angiogenesis. Its membranous localization pattern makes it especially useful for highlighting microvessel density in tumor specimens.

Structurally, PECAM-1 contains six extracellular immunoglobulin-like domains, a single transmembrane region, and a cytoplasmic tail with immunoreceptor tyrosine-based inhibitory motifs. These motifs participate in intracellular signaling events that regulate cell survival, migration, and cytoskeletal organization. PECAM-1 integrates signals from mechanical shear stress and inflammatory stimuli, contributing to vascular homeostasis.

Dysregulation of PECAM1 expression has been implicated in vascular inflammation, atherosclerosis, thrombosis, and tumor-associated angiogenesis. Increased endothelial expression often correlates with neovascularization in malignant tissues. A PECAM-1 antibody is suitable for detecting CD31 expression in research applications focused on endothelial biology and vascular remodeling.

Application Notes

Optimal dilution of the PECAM-1 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 PECAM-1 antibody.

Storage

Aliquot the PECAM-1 antibody and store frozen at -20°C or colder. Avoid repeated freeze-thaw cycles.

