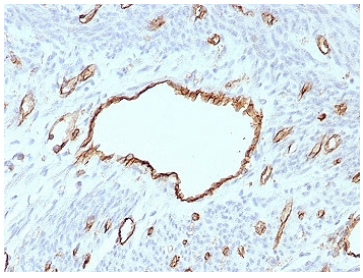
PECAM-1 Antibody / CD31 [clone C31/8593R] (V4543)

Catalog No.	Formulation	Size
V4543-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4543-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4543SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

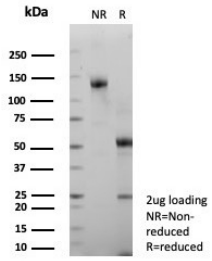
Recombinant RABBIT MONOCLONAL

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	C31/8593R
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 C31/8593R). 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 C31/8593R) as confirmation of integrity and purity.

Description

PECAM-1 antibody recognizes CD31, a junctional adhesion receptor widely expressed on vascular endothelial cells and hematopoietic lineages. The protein is encoded by the PECAM1 gene and is primarily localized to the cell membrane at endothelial cell-cell contacts. CD31 is considered a canonical endothelial marker because of its strong and consistent expression in vascular linings throughout adult tissues.

Functionally, PECAM-1 regulates endothelial barrier integrity and mediates leukocyte passage from the bloodstream into surrounding tissues. Through homophilic binding interactions, it maintains endothelial cohesion while simultaneously enabling controlled transmigration during immune responses. CD31 antibody is frequently used to evaluate vascular density, identify endothelial differentiation, and assess tumor vascularization in research settings.

At the molecular level, PECAM-1 is composed of extracellular immunoglobulin-like domains that facilitate adhesion and intracellular signaling motifs that modulate downstream phosphatase recruitment. These features allow PECAM-1 to participate in integrin signaling and mechanotransduction pathways that respond to shear stress within blood vessels. The protein is also involved in platelet-endothelial interactions and contributes to thromboregulatory mechanisms.

Altered PECAM-1 expression patterns are associated with inflammatory disorders, vascular injury, and malignancy-associated angiogenesis. Because CD31 expression is concentrated in vascular endothelium, it serves as a reliable tool for studying microvascular architecture and endothelial activation. PECAM-1 antibody supports research applications examining vascular development, inflammation, and tumor biology.

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 -20oC or colder. Avoid repeated freeze-thaw cycles.