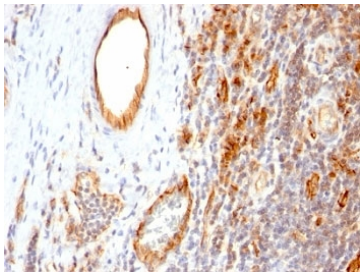
PECAM Antibody 1A10 / CD31 Monoclonal Antibody [clone 1A10] (V2781S)

Catalog No.	Formulation	Size
V2781S-0.5ML	Bioreactor concentrate with 0.05% sodium azide	0.5 ml
V2781S-0.1ML	Bioreactor concentrate with 0.05% sodium azide	0.1 ml
V2781IHC-7ML	Prediluted in 1X PBS, 0.05% sodium azide; *For IHC use only*	7 ml

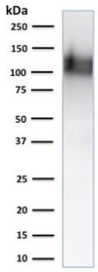
Citations (11)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Bioreactor concentrate
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	1A10
Purity	Unpurified high titer supernatant
UniProt	P16284
Localization	Cell surface and cytoplasm of endothelial cells
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1:50-1:100 for 30 min at RT
Limitations	This PECAM Antibody 1A10 is available for research use only.



PECAM Antibody 1A10 staining of human tonsil vasculature by IHC. Immunohistochemistry of FFPE human tonsil sections using PECAM Antibody 1A10. Brown staining prominently highlights vascular endothelial structures distributed throughout the lymphoid tissue, producing a characteristic vessel-associated pattern consistent with CD31/PECAM1 localization. The surrounding tonsillar architecture provides clear contrast to the positively stained vascular profiles. This CD31 Monoclonal Antibody demonstrates endothelial recognition in human tonsil tissue.



PECAM Antibody 1A10 detection of CD31 in THP-1 cells by WB. Western blot testing of human THP-1 cell lysate with PECAM Antibody 1A10. A prominent immunoreactive band is detected within the expected approximately 83-130 kDa range for CD31/PECAM1. Variation in the apparent molecular weight of PECAM1 is expected because the mature cell-surface glycoprotein undergoes substantial glycosylation. The observed signal is therefore consistent with detection of mature PECAM1 and demonstrates target recognition by clone 1A10, a CD31 Monoclonal Antibody with an established history of published research use.

Description

PECAM Antibody 1A10 / CD31 Monoclonal Antibody recognizes platelet endothelial cell adhesion molecule 1, a transmembrane glycoprotein encoded by the PECAM1 gene. Commonly known as PECAM-1 or CD31, this protein belongs to the immunoglobulin superfamily of cell adhesion molecules. PECAM1 contains six extracellular immunoglobulin-like domains, a single transmembrane region and a cytoplasmic domain containing regulatory tyrosine residues. It is prominently expressed by vascular endothelial cells and is also found on platelets, monocytes, neutrophils and subsets of lymphocytes. This characteristic expression pattern has established CD31 as an important marker in vascular, endothelial and hematopoietic research.

PECAM1 contributes to homophilic interactions between neighboring endothelial cells and participates in the organization of endothelial junctions. Its cytoplasmic domain contains immunoreceptor tyrosine-based inhibitory motifs that become phosphorylated and recruit intracellular signaling proteins. These interactions allow PECAM-1 to function not only as an adhesion molecule but also as a regulator of signaling responses associated with endothelial integrity, mechanical forces and inflammation. A PECAM Antibody 1A10 provides a clone-specific reagent for investigating this multifunctional cell-surface molecule.

CD31 also has an important role in leukocyte transendothelial migration. Interactions involving PECAM1 at endothelial junctions contribute to the passage of leukocytes across the vascular wall during immune and inflammatory responses. The protein is additionally involved in endothelial migration, angiogenesis and vascular remodeling. Because CD31 is strongly associated with endothelial cells, its expression is widely studied in research concerning vascular development, cardiovascular biology, inflammation, tissue repair and tumor angiogenesis. A CD31 Monoclonal Antibody can therefore be useful for investigating both vascular architecture and the molecular interactions occurring between endothelial and immune cells.

Clone 1A10 has been used in multiple published studies investigating CD31/PECAM1, providing an established literature history for this monoclonal antibody. This published use should be distinguished from the substantially larger citation counts that can result from automated clone-name matching. NSJ Bioreagents provides clone 1A10 for researchers studying endothelial biology, vascular organization and PECAM1 expression. A PECAM Antibody 1A10 provides a clone-specific tool for investigating platelet endothelial cell adhesion molecule 1 and its roles in vascular and immune biology.

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 PECAM Antibody 1A10 should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 min
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Prokaryotic recombinant fusion protein corresponding to a portion of the extracellular domain downstream of the signal sequence of CD31/PECAM was used as the immunogen for the PECAM Antibody 1A10.

Storage

Store the PECAM Antibody 1A10 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

PECAM-1 antibody, PECAM1 antibody, CD31 antibody, Platelet Endothelial Cell Adhesion Molecule 1 antibody, PECA1 antibody, EndoCAM antibody

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