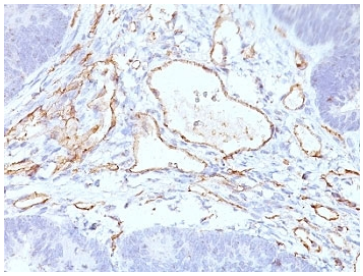
CD31 Antibody Cocktail [clone C31.3 + C31.7 + C31.10] (V2784)

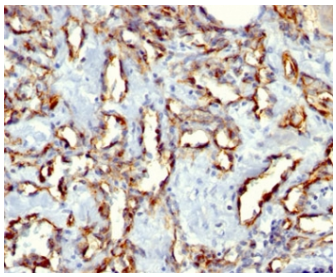
Catalog No.	Formulation	Size
V2784-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2784-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2784SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2784IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

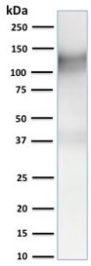
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	C31.3 + C31.7 + C31.10
Purity	Protein G affinity chromatography
UniProt	P16284
Localization	Cell surface and cytoplasm of endothelial cells
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD31 antibody cocktail is available for research use only.



IHC: Formalin-fixed, paraffin-embedded colon carcinoma stained with CD31 antibody cocktail (C31.3+C31.7+C31.10).



IHC: Formalin-fixed, paraffin-embedded human angiosarcoma stained with CD31 antibody cocktail (clones C31.3 + C31.7 + C31.10).



Western blot testing of human ThP1 cell lysate with CD31 antibody cocktail (clones C31.3 + C31.7 + C31.10). Expected molecular weight: 83-130 kDa depending on level of glycosylation.

Description

CD31 antibody clones C31.3, C31.7, and C31.10 are monoclonal antibodies that together recognize platelet endothelial cell adhesion molecule 1, also known as PECAM-1. CD31 is a 130 kDa glycoprotein expressed on endothelial cells, platelets, monocytes, neutrophils, and some T cell subsets. It mediates homophilic and heterophilic interactions that regulate leukocyte transmigration, angiogenesis, and vascular integrity. Because of its consistent endothelial expression, CD31 is one of the most widely used markers of blood vessels. NSJ Bioreagents provides this antibody blend for vascular biology, immunology, and oncology research.

The antibodies produce strong membranous staining of endothelial cells, clearly delineating vascular structures in tissue sections. In pathology, CD31 detection is routinely applied to identify vascular tumors such as angiosarcomas and hemangiomas. It also supports differentiation of vascular lesions from non-vascular neoplasms, making it a valuable diagnostic marker.

In vascular biology, CD31 is indispensable for studies of angiogenesis, vascular remodeling, and endothelial barrier function. The antibody highlights blood vessel architecture and allows quantitative assessment of microvessel density in tissues. This information is crucial for understanding wound healing, cardiovascular disease, and tissue regeneration.

In oncology, CD31 antibody clones C31.3, C31.7, and C31.10 are widely used to evaluate tumor angiogenesis. Microvessel density within tumors often correlates with prognosis and therapeutic response. Detecting CD31 provides researchers with an efficient means of quantifying vascularization in experimental models and clinical specimens. It also supports studies into how tumors manipulate angiogenesis to sustain growth and metastasis.

In immunology, CD31 has been studied for its role in leukocyte trafficking. It participates in transendothelial migration of monocytes and neutrophils during inflammation. By detecting CD31 on both endothelial cells and leukocytes, this antibody supports investigations into immune surveillance and inflammatory responses.

Beyond oncology and vascular research, CD31 detection is relevant in cardiovascular disease studies. Altered CD31 expression has been associated with atherosclerosis and endothelial dysfunction. The antibody provides a reliable tool for exploring vascular pathology in both experimental and translational contexts.

Validated across tissue-based and cell-based systems, the antibody blend consistently produces strong membranous staining with minimal background. Its reproducibility has made it a standard choice for vascular and immune studies. Alternate names include PECAM-1 antibody, platelet endothelial cell adhesion molecule antibody, and vascular endothelial marker antibody.

Application Notes

Optimal dilution of the CD31 antibody cocktail 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

Human recombinant protein was used as the immunogen for the CD31 antibody cocktail.

Storage

Store the CD31 antibody cocktail at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).