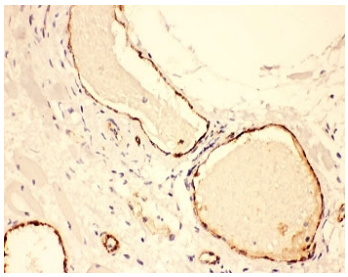
vWF Antibody / Microvessel Density Marker Antibody (R31491)

Catalog No.	Formulation	Size
R31491	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

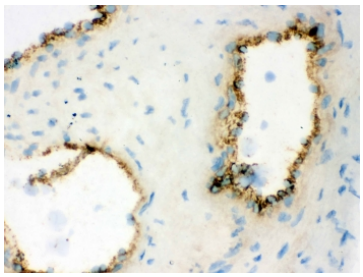
Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA, 0.025% sodium azide
Gene ID	7450
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml IHC (FFPE) : 0.5-1ug/ml IHC (Frozen) : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This VWF antibody is available for research use only.

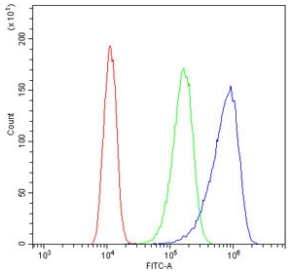
Western blot testing of VWF antibody and human HT1080 lysate. Predicted molecular weight ~309 kDa.



vWF Antibody / Microvessel Density Marker Antibody. Immunohistochemistry analysis of human lung cancer tissue shows HRP-DAB brown staining of endothelial cells forming discrete microvascular profiles within the tumor microenvironment. Numerous small-caliber vessels and capillary-like structures are clearly delineated, allowing visualization of microvessel distribution between tumor cell clusters. The staining pattern supports identification and assessment of microvessel density by highlighting individual endothelial-lined structures across the tissue section. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



vWF Antibody / Microvessel Density Marker Antibody. Immunohistochemistry analysis of frozen human placental tissue shows HRP-DAB brown staining of endothelial cells outlining microvascular and capillary structures within placental tissue. The staining highlights discrete, endothelial-lined vessel profiles with well-defined luminal borders, enabling clear identification of individual microvessels. This pattern supports visualization and assessment of microvessel density by delineating capillary networks and small vascular channels within the tissue.



Flow cytometry testing of human A431 cells with VWF antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= VWF antibody.

Description

Von Willebrand factor (VWF) is a secreted glycoprotein encoded by the VWF gene and synthesized primarily by vascular endothelial cells and megakaryocytes. vWF Antibody / Microvessel Density Marker Antibody recognizes a protein that is consistently expressed in endothelial cells, making it highly suitable for quantifying vascular structures within tissue. VWF antibody, also referred to as von Willebrand factor antibody or factor VIII-related antigen antibody, is widely used in studies where measuring the extent of vascularization is a primary objective.

Microvessel density (MVD) is a commonly used parameter for evaluating the abundance of capillaries and small vessels within a defined tissue area. Because endothelial cells form the structural basis of these vessels, markers such as VWF provide a direct means of identifying and counting vascular profiles. vWF Antibody is particularly effective for this purpose due to its consistent endothelial localization, allowing clear delineation of microvascular structures across a range of tissue types.

In tissue sections, VWF staining highlights capillaries and small-caliber vessels as discrete endothelial-lined profiles. These structures can be counted manually or analyzed using image-based quantification approaches to determine vascular density. Changes in microvessel density can reflect alterations in tissue physiology, including increased vascularization in proliferative environments or reduced perfusion in degenerative conditions. The ability to reliably detect these vessels is therefore critical for accurate quantitative analysis.

VWF plays a functional role in hemostasis, but in MVD-focused studies its primary value lies in its structural association with endothelial cells. Because it is not broadly expressed across non-vascular cell types, VWF provides a focused signal that minimizes ambiguity when identifying vessel profiles. This makes it particularly useful for distinguishing true vascular structures from surrounding tissue components in densely cellular environments.

Microvessel density assessment is widely used in research involving tumor biology, tissue regeneration, and vascular

adaptation. In these contexts, the number and distribution of microvessels can provide insight into tissue organization and functional capacity. VWF staining supports this analysis by enabling consistent identification of endothelial-lined structures that can be quantified across samples.

vWF Antibody / Microvessel Density Marker Antibody is especially suited for studies requiring quantitative evaluation of vascular presence. By highlighting endothelial cells in capillary networks and small vessels, it supports accurate measurement of microvessel density and provides a reliable foundation for vascular quantification in diverse biological systems.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the vWF Antibody / Microvessel Density Marker Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 2535-2813) was used as the immunogen for this vWF Antibody / Microvessel Density Marker Antibody.

Storage

After reconstitution, the VWF antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

VWF microvessel density antibody, vWF MVD marker antibody, capillary density marker antibody, VWF vessel density antibody, vWF microvascular density antibody