MS Validated Antibodies

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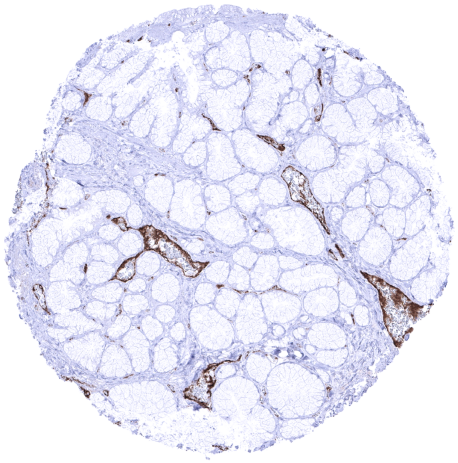
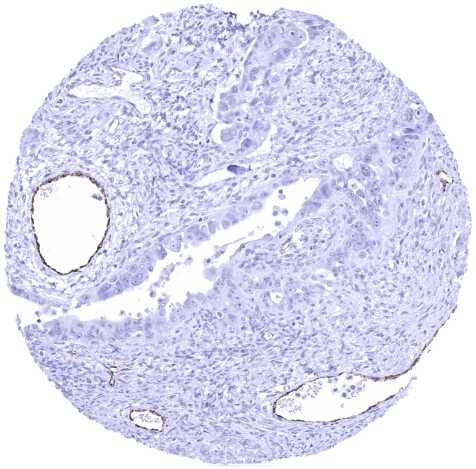
Anti- vWF Antibody
MSVA-521R / Recombinant Rabbit monoclonal

Human SwissProt	P04275
Human Gene Symbol	VWF
Synonyms	Coagulation Factor VIII, Factor VIII Related Antigen, F8VWF, von Willebrand Antigen 2,von Willebrand Disease (vWD)
Specificity	VWF
Immunogen	Recombinant fragment of human VWF protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell Surface

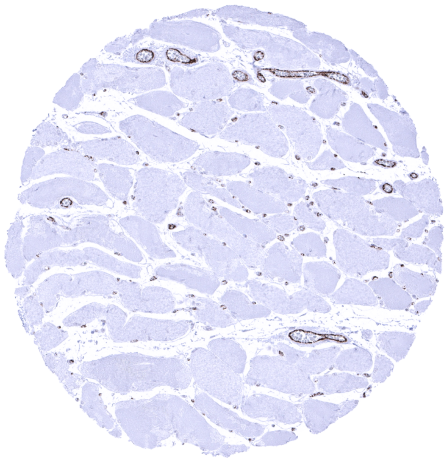
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Colon: A moderate to strong endothelial vWF immunostaining should be seen in a fraction of blood vessels.
Negative Control	Colon: vWF immunostaining should be completely absent in epithelial and muscular cells.



Duodenum, brunner gland - In the Brunner gland, endothelial vWF immunostaining is strongest in venules.



Ovary- Serous high-grade carcinoma showing distinct endothelial vWF staining in a subset of intratumoral vessels.



Skeletal muscle - In skeletal muscle, endothelial vWF immunostaining is strong in postcapillary venules and somewhat weaker in capillaries.

Biology

Von Willebrand factor (vWF) is a glycoprotein coded by then vWF gene on 12p13.3. vWF
circulates in the blood in two distinct compartments. Plasma vWF, is synthesized and secreted from endothelial cells while platelet vWF is synthesized by megakaryocytes. vWF represents a key protein in hemostasis. vWF is not an enzyme but contributes to hemostasis by binding to other proteins such as factor VIII, activated platelet receptors or collagen. VWF protects inactive factor VIII from degradation and releases it if triggered by thrombin. vWF forms a bridge between collagen exposed under injured endothelium and platelets to support blood clot formation under high shear blood flow. Increased vWF plasma levels occur in many cardiovascular, neoplastic, and connective tissue diseases are linked to an increased risk of thrombosis. VWF is deficient in von Willebrand disease which results in increased bleeding tendency mainly of the skin and mucous membranes. In normal tissues vWF immunostaining is only seen in endothelial cells, megacaryocytes, and platelets. Within endothelial cells, the level of vWF expression varies between different locations. Endothelial vWF expression is generally higher in veins and venules than in arteries and arterioles and vWF expression in capillaries varies between organs and even within organs. A particularly low endothelial vWF expression is seen in kidney liver, stomach and in various exocrine and endocrine glands (pancreas, salivary glands, adrenal gland, thyroid, parathyroid). In tumors, an endothelial vWF immunostaining of variable intensity is usually seen in a fraction of small intratumoral blood vessels. The quantitiy of stained vessels and the staining intensity appears varies between tumors.

Potential Research Applications

-The function of capillary vWF remains unclear. It has been suggested that adequate vWF supply for the bloodstream requires a larger endothelial cell area than the large vessels alone can supply.
-Data have suggested that vWF may be upregulated in activated endothelial cells. vWF expression levels in vessels of neoplastic tissues could therefore represent a surrogate of the angiogenic potential of a tumor.
-It is currently unclear whether increased vWF levels in cancer patients might be caused by vWF expression of cancer cells.

Protocol Suggestions

Dilution: 1:50 ; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

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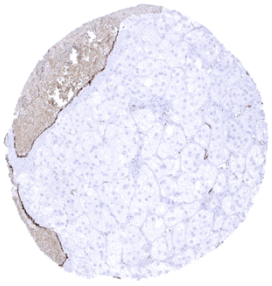
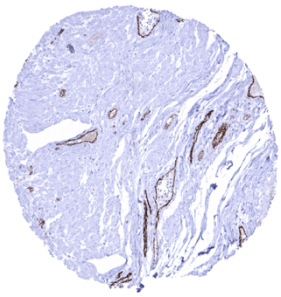
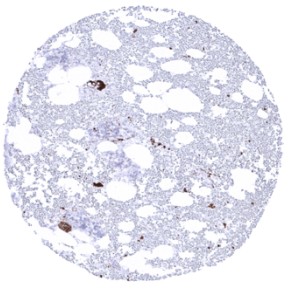


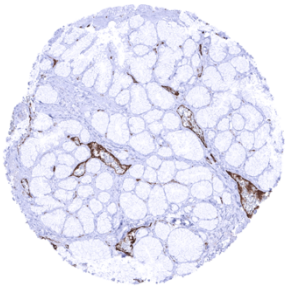
Adrenal gland - A strong endothelial vWF immunostaining is seen in a venule while vWF staining is rather low or absent in adrenocortical capillaries



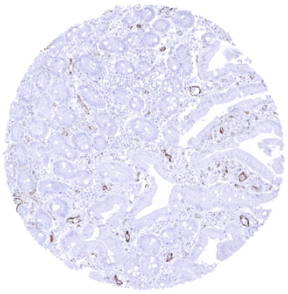
Appendix, muscular wall - Strong vWF immunostaining of endothelial cells



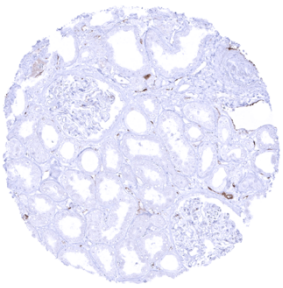
Bone marrow - A strong vWF immunostaining occurs in megacaryocytes



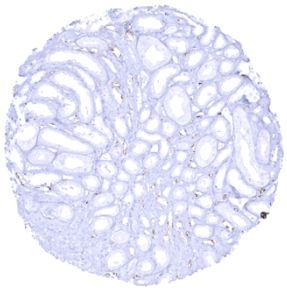
Duodenum, Brunner gland



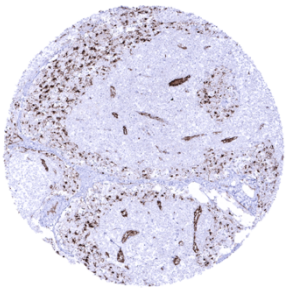
Duodenum, mucosa - A moderate endothelial vWF immunostaining is seen in postcapillary venules while staining intensity is low or absent in capillaries



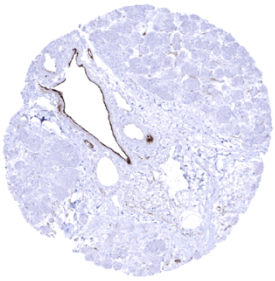
Kidney, cortex - Endothelial vWF immunostaining is weak or absent in most small vessels of the kidney.



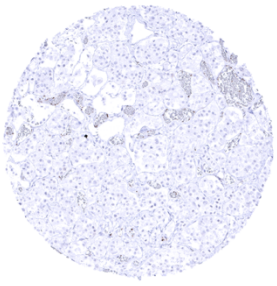
Kidney, medulla - Endothelial vWF immunostaining is weak or absent in most small vessels of the kidney



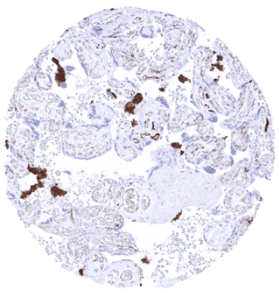
Lymph node - Variable endothelial cell vWF immunostaining in capillaries and other small vessels in a lymph node



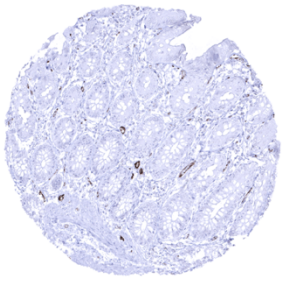
Pancreas - A strong endothelial vWF immunostaining is seen in a venule while vWF staining is rather low or absent in arterioles and most other small vessels of the pancreas



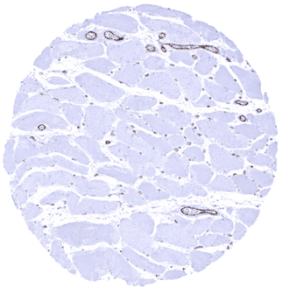
Pituitary gland, anterior lobe - vWF immunostaining is very low or absent in small blood vessels in this adenohypophysis sample



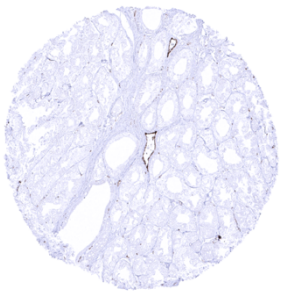
Placenta, mature - Endothelial vWF immunostaining of variable intensity occurs in the placenta. A strong vWF positivity is also seen in blood clots



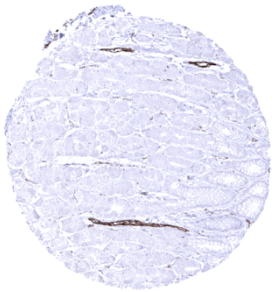
Rectum, mucosa -Only few small blood vessels show a strong endothelial vWF immunostaining while staining intensity is low or absent in most capillaries



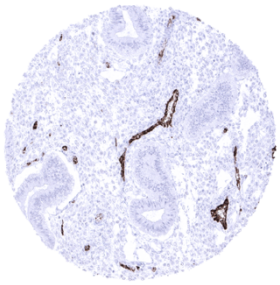
Skeletal muscle - Moderate vWF immunostaining in capillaries, strong staining in postcapillary venules



Stomach, antrum - A strong endothelial vWF immunostaining is seen in postcapillary venules while staining intensity is low or absent in capillaries



Stomach, corpus - A strong endothelial vWF immunostaining is seen in postcapillary venules while staining intensity is low or absent in capillaries



Uterus, endometrium (proliferation)