Human vWF-A2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1072103

Catalog Number: MAB11543

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human VWF in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1072103
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human VWF Asp1498-Val1665 Accession # P04275
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

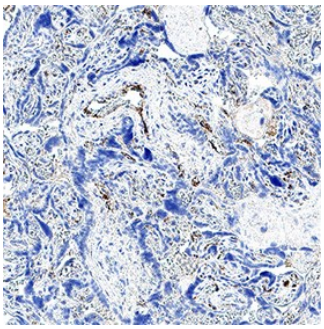
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human placenta

DATA

Immunohistochemistry



Detection of vWF-A2 in Human Placenta. vWF-A2 was detected in immersion fixed paraffin-embedded sections of human placenta using Mouse Anti-Human vWF-A2 Monoclonal Antibody (Catalog # MAB11543) at 25 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001) or the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm of endothelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

von Willebrand Factor (vWF) is a large, multimeric glycoprotein made by endothelial cells and megakaryocytes. The pre-pro-vWF protein contains 2813 amino acids (aa), which consists of 22 aa signal peptide, 741 aa propeptide, and mature vWF monomer of 2050 aa (1-4). The pro-vWF undergoes dimerization in the endoplasmic reticulum (ER) through C-terminal “cysteine-knot” (CK) domain. The pro-vWF dimmers are transported to Golgi and form multimers by forming disulfide bond in amino-terminal region of the mature form. The proteolytic processing of pro-region also occurs in Golgi. The matured vWF is stored in Weibel-Pallade bodies in endothelial cells and granules in megakaryocytes and platelets. The unusually-large vWF (ulvWF) multimers released from cells are very efficient in binding to platelets to form thrombus. The population of these highly active ulvWF multimers is controlled by a specific protease, ADAMTS13, which cleaves between residues Tyr1605 and Met1606 in the A2 domain of vWF. In the plasma, vWF appears as a series of large and intermediate multimers with molecular masses from several thousand to 500 kDa. vWF also performs hemostatic functions (3-5). In a high shear-stressed environment, vWF undergoes conformational change to expose a binding site for glycoprotein Ibα. As a result, vWF facilitates aggregation of platelets. In addition to platelet binding, vWF binds coagulation factor VIII to increase the lifetime of FVIII in plasma. The purified rhvWF-A2 contains the A2 domain of vWF.

References:

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