Human vWF-A2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 210905

Catalog Number: MAB27641

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human vWF-A2 in direct ELISAs and Western blots. Detects an epitope N-terminal to the ADAMTS13 cleavage site between aa 1498-1605. Another antibody (clone 210909, Catalog # MAB2764) recognizes an epitope on the C-terminal side (aa 1606-1665) of the ADAMTS13 cleavage site.
Source	Monoclonal Mouse IgG_{2B} Clone # 210905
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human vWF-A2 Asp1498-Val1665 Accession # P04275
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose and Mannitol. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

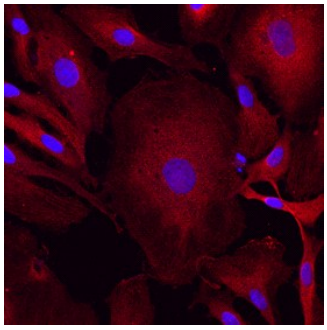
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Human vWF-A2 (Catalog # 2764-WF)
Immunocytochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Cell lysates spiked with Recombinant Human vWF-A2 (Catalog # 2764-WF), see our available Western blot detection antibodies

DATA

Immunocytochemistry



vWF-A2 in HUVEC Human Cells. vWF-A2 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Mouse Anti-Human vWF-A2 Monoclonal Antibody (Catalog # MAB27641) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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 a 22 aa signal peptide, a 741 aa propeptide and a mature vWF monomer of 2050 aa (1-4). The pro-vWF undergoes dimerization in the endoplasmic reticulum (ER) through a C-terminal “cysteine-knot” (CK) domain. The pro-vWF dimers are transported to the Golgi and associate into multimers by forming disulfide bonds in the amino-terminal region of the mature form. Proteolytic processing of the pro-region also occurs in the Golgi. Mature 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 size 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 changes to expose a binding site for glycoprotein Ibα. As a result, vWF facilitates the 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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