Human vWF-A2 APC-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 210905

Catalog Number: IC27641A

100 TESTS

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
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

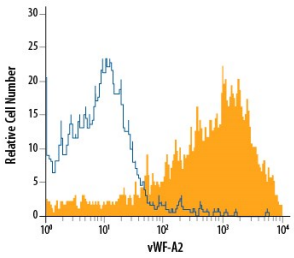
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of vWF-A2 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells were stained with Mouse Anti-Human vWF-A2 APC-conjugated Monoclonal Antibody (Catalog # IC27641A, filled histogram) or isotype control antibody (Catalog # IC0041A, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human vWF - A2 APC - conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 210905

Catalog Number: IC27641A

100 TESTS

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:

1. Sadler, J. E. (1998) Annu. Rev. Biochem. **67**:395.
2. Ruggeri, Z. M. (2003) Cur. Opin. Hemat. **10**:142.
3. Michiels, J. J. *et al.* (2006) Clin. Appl. Thromb. Hemost. **12**:397.
4. Groot, E. *et al.* (2007) Cur. Opin. Hemat. **14**:284.
5. Lenting, P. J. *et al.* (2007) J. Thromb. Haemos. **5**:1353.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956