

## DESCRIPTION

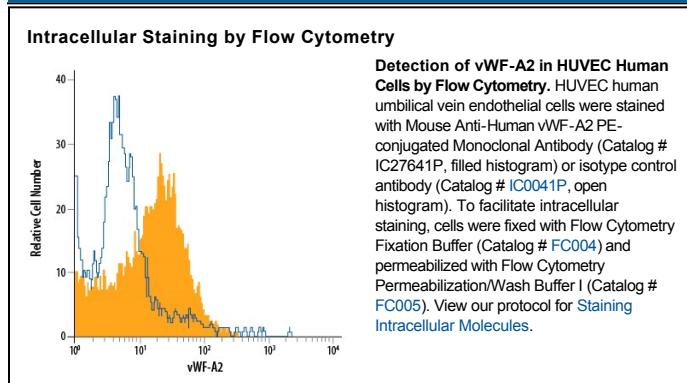
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human vWF-A2 in direct ELISAs and Western blots. Detects an epitope N-terminal to the ADAMTS13 cleavage site between aa 1498-1605. Another antibody (clone 210909, Catalog # <a href="#">MAB2764</a> ) recognizes an epitope on the C-terminal side (aa 1606-1665) of the ADAMTS13 cleavage site.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 210905
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human vWF-A2 Asp1498-Val1665 Accession # P04275
<b>Conjugate</b>	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
<b>Formulation</b>	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
<b>Intracellular Staining by Flow Cytometry</b>	10 µL/10 <sup>6</sup> cells	See Below

## DATA



## 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.

## 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 Iba. 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 rvWF-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.

