SANTA CRUZ BIOTECHNOLOGY, INC.

VWF (3E2D10): sc-21784

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Von Willebrand disease is a congenital bleeding disorder caused by defects in the von Willebrand factor protein (VWF). VWF is a multimeric glycoprotein that is found in endothelial cells, plasma and platelets, and it is involved in the coagulation of blood at injury sites. VWF acts as a carrier protein for Factor VIII, a cofactor required for coagulation, and it promotes platelet adhesion and aggregation. Several factors are known to stimulate the binding of VWF to platelets, including glycoprotein 1b, ristocetin, botrocetin, collagen, sulphatides and heparin. Of the several domains contained within VWF, the A1, A2 and A3 domains have been shown to mediate this activation. VWF is thought to undergo a variety of posttranslational modifications that influence the affinity and availability for Factor VII, including cleavage of the propeptide and formation of N-terminal intersubunit disulfide bonds.

REFERENCES

1. Naiem, M., et al. 1982. The value of immunohistological screening in the production of monoclonal antibodies. J. Immunol. Methods 50: 145-160.
2. Wise, R.J., et al. 1991. The role of von Willebrand factor multimers and propeptide cleavage in binding and stabilization of Factor VIII. J. Biol. Chem. 266: 21948-21955.
3. Fischer, B.E., et al. 1996. Effect of multimerization of human and recombinant von Willebrand factor on platelet aggregation, binding to collagen and binding of coagulation Factor VIII. Thromb. Res. 84: 55-66.

CHROMOSOMAL LOCATION

Genetic locus: VWF (human) mapping to 12p13.31.

SOURCE

VWF (3E2D10) is a mouse monoclonal antibody raised against amino acids 845-949 of VWF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VWF (3E2D10) is recommended for detection of VWF of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for VWF siRNA (h): sc-36828, VWF shRNA Plasmid (h): sc-36828-SH and VWF shRNA (h) Lentiviral Particles: sc-36828-V.

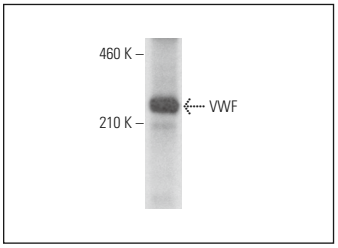
Molecular Weight of VWF: 250 kDa.

Positive Controls: human lung extract: sc-363767, human platelet extract: sc-363773 or HUV-EC-C whole cell lysate: sc-364180.

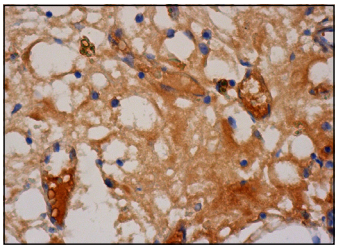
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



VWF (3E2D10): sc-21784. Western blot analysis of VWF expression in human lung tissue extract.



VWF (3E2D10): sc-21784. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of megakaryocytes and extracellular staining of fibrous tissue cells.

SELECT PRODUCT CITATIONS

1. Germann, B., et al. 2008. Applying blood-brain barrier *in vitro* models to study the influence of drugs on endothelial cells—effects of selected COX-inhibitors. Pharmazie 63: 303-307.
2. Motta, A., et al. 2009. Silk fibroin processing and thrombogenic responses. J. Biomater. Sci. Polym. Ed. 20: 1875-1897.
3. Tutuncu, N., et al. 2017. Should the macular lesions around spinal dysraphism be excised? Analysis of macular lesions accompanying spinal dysraphism. Turk. Neurosurg. E-published.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

CONJUGATES

See **VWF (C-12): sc-365712** for VWF antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.