SANTA CRUZ BIOTECHNOLOGY, INC.

VWF (C-12): sc-365712

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 1β, 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; Vwf (mouse) mapping to 6 F3.

SOURCE

VWF (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2779-2813 near the C-terminus 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.

VWF (C-12) is available conjugated to agarose (sc-365712 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365712 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365712 PE), fluorescein (sc-365712 FITC), Alexa Fluor® 488 (sc-365712 AF488), Alexa Fluor® 546 (sc-365712 AF546), Alexa Fluor® 594 (sc-365712 AF594) or Alexa Fluor® 647 (sc-365712 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365712 AF680) or Alexa Fluor® 790 (sc-365712 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365712 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

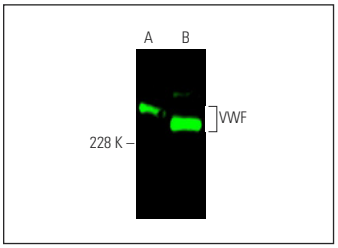
VWF (C-12) is recommended for detection of VWF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VWF siRNA (h): sc-36828, VWF siRNA (m): sc-36829, VWF siRNA (r): sc-270212, VWF shRNA Plasmid (h): sc-36828-SH, VWF shRNA Plasmid (m): sc-36829-SH, VWF shRNA Plasmid (r): sc-270212-SH, VWF shRNA (h) Lentiviral Particles: sc-36828-V, VWF shRNA (m) Lentiviral Particles: sc-36829-V and VWF shRNA (r) Lentiviral Particles: sc-270212-V.

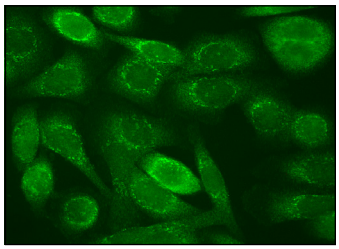
Molecular Weight of VWF: 250 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, human platelet extract: sc-363773 or mouse heart extract: sc-2254.

DATA



VWF (C-12): sc-365712. Near-infrared western blot analysis of VWF expression in human platelet extract (**A**) and HUV-EC-C whole cell lysate (**B**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



VWF (C-12) Alexa Fluor® 488: sc-365712 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic vesicles localization. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Jung, S.J., et al. 2013. Primo vascular system floating in lymph ducts of rats. J. Acupunct. Meridian Stud. 6: 306-318.
2. Alqahtani, S.A. and Alhawiti, N.M. 2019. Administration of testosterone improves the prothrombotic and antifibrinolytic parameters associated with its deficiency in an orchidectiomized rat model. Platelets 30: 624-630.
3. Hassanpour, M., et al. 2020. Autophagy modulation altered differentiation capacity of $CD146^+$ cells toward endothelial cells, pericytes, and cardiomyocytes. Stem Cell Res. Ther. 11: 139.
4. Yang, G., et al. 2021. Construction of tissue engineering bone with the co-culture system of ADSCs and VECs on partially deproteinized biologic bone *in vitro:* a preliminary study. Mol. Med. Rep. 23: 58.

RESEARCH USE

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