SANTA CRUZ BIOTECHNOLOGY, INC.

VWF (F8/86): sc-53466

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.

CHROMOSOMAL LOCATION

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

SOURCE

VWF (F8/86) is a mouse monoclonal antibody raised against VWF isolated from plasma 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 (F8/86) is available conjugated to agarose (sc-53466 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53466 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53466 PE), fluorescein (sc-53466 FITC), Alexa Fluor® 488 (sc-53466 AF488), Alexa Fluor® 546 (sc-53466 AF546), Alexa Fluor® 594 (sc-53466 AF594) or Alexa Fluor® 647 (sc-53466 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53466 AF680) or Alexa Fluor® 790 (sc-53466 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VWF (F8/86) is recommended for detection of VWF of human origin by Western Blotting (starting dilution 1:200, 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 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 platelet extract: sc-363773 or HUV-EC-C whole cell lysate: sc-364180.

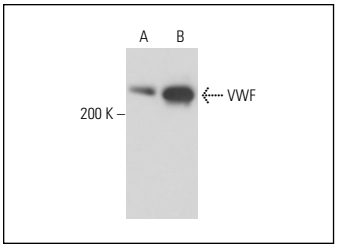
STORAGE

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

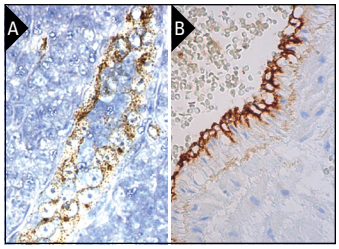
RESEARCH USE

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

DATA



VWF (F8/86): sc-53466. Western blot analysis of VWF expression in human platelet extract (**A**) and HUV-EC-C whole cell lysate (**B**).



VWF (F8/86): sc-53466. Immunoperoxidase staining of formalin fixed, parraffin-embedded human tonsil tissue showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human umbilical cord tissue showing membrane staining of umbilical vein endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Karaoz, E. 2009. Pancreatic islet derived stem cells may have a key role in type 1 diabetes pathogenesis. Cell Tissue Biol. Res. 2: 8-22.
2. Anzalone, R., et al. 2013. Isolation and characterization of CD276+/HLA-E+ human subendocardial mesenchymal stem cells from chronic heart failure patients: analysis of differentiative potential and immunomodulatory markers expression. Stem Cells Dev. 22: 1-17.
3. Shen, K., et al. 2014. Notoginsenoside Ft1 activates both glucocorticoid and estrogen receptors to induce endothelium-dependent, nitric oxide-mediated relaxations in rat mesenteric arteries. Biochem. Pharmacol. 88: 66-74.
4. Peters, E.B., et al. 2015. Umbilical cord blood-derived mononuclear cells exhibit pericyte-like phenotype and support network formation of endothelial progenitor cells *in vitro.* Ann. Biomed. Eng. 43: 2552-2568.
5. Qin, D., et al. 2017. Wisp2 disruption represses Cxcr4 expression and inhibits BMSCs homing to injured liver. Oncotarget 8: 98823-98836.
6. Volz, A.C., et al. 2018. Completely defined co-culture of adipogenic differentiated adipose-derived stem cells and microvascular endothelial cells. ALTEX 35: 464-476.
7. Corsello, T., et al. 2019. Wharton's jelly mesenchymal stromal cells from human umbilical cord: a close-up on immunomodulatory molecules featured *in situ* and *in vitro.* Stem Cell Rev. Rep. 15: 900-918.
8. Zou, C., et al. 2020. Reduction of mNAT1/hNAT2 contributes to cerebral endothelial necroptosis and Aβ accumulation in Alzheimer's disease. Cell Rep. 33: 108447.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.