SANTA CRUZ BIOTECHNOLOGY, INC.

TF (C-7): sc-393657

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hemostasis following tissue injury involves the deployment of essential plasma procoagulants (Prothrombin and Factors X, IX, V and VIII), which are involved in a blood coagulation cascade leading to the formation of insoluble Fibrin clots and the promotion of platelet aggregation. Coagulation Factor V (Factor V, FV, proaccelerin, labile factor) is a 2,196 amino acid, single chain glycoprotein that is cleaved by Thrombin to yield an active, Ca^{2+}-dependent dimer that is essential to the blood coagulation cascade. Together with catalytic Factor Xa and Ca^{2+} on the surface of platelets or endothelial cells, Factor Va coordinates into a Prothrombinase complex, which mediates proteolysis of Prothrombin into active Thrombin. Tissue factor (TF), also designated coagulation Factor III) is a cell surface glycoprotein that enables cells to initiate blood coagulation cascades. It functions as a high-affinity receptor for coagulation Factor VII.

REFERENCES

1. Davie, E.W. and Fujikawa, K. 1975. Basic mechanisms in blood coagulation. Annu. Rev. Biochem. 44: 799-829.
2. Kane, W.H., et al. 1986. Cloning of a cDNA coding for human Factor V, a blood coagulation factor homologous to Factor VIII and ceruloplasmin. Proc. Natl. Acad. Sci. USA 83: 6800-6804.
3. Jenny, R.J., et al. 1987. Complete cDNA and derived amino acid sequence of human Factor V. Proc. Natl. Acad. Sci. USA 84: 4846-4850.
4. Davie, E.W., et al. 1991. The coagulation cascade: initiation, maintenance and regulation. Biochemistry 30: 10363-10370.

CHROMOSOMAL LOCATION

Genetic locus: F3 (human) mapping to 1p21.3.

SOURCE

TF (C-7) is a mouse monoclonal antibody raised against amino acids 15-295 mapping at the C-terminus of TF 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

TF (C-7) is recommended for detection of TF of 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 TF siRNA (h): sc-44984, TF shRNA Plasmid (h): sc-44984-SH and TF shRNA (h) Lentiviral Particles: sc-44984-V.

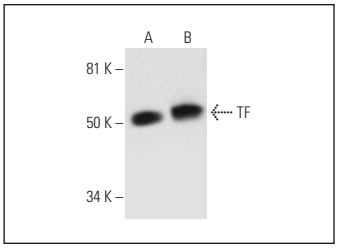
Molecular Weight of TF: 47 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260 or A-431 whole cell lysate: sc-2201.

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.

DATA



TF (C-7): sc-393657. Western blot analysis of TF expression in WI-38 (**A**) and A-431 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wu, H., et al. 2019. Yiqi-Huoxue Granule (YQHX) downregulates prothrombotic factors by modulating KLF2 and NFκB in HUVECs following LPS stimulation. Oxid. Med. Cell. Longev. 2019: 9425183.
2. Lu, T., et al. 2020. Up-regulation of hypoxia-inducible factor antisense as a novel approach to treat ovarian cancer. Theranostics 10: 6959-6976.
3. Xu, Y., et al. 2020. Deletion of glutathione S-transferase ω 1 activates type I interferon genes and downregulates tissue factor. Cancer Res. 80: 3692-3705.
4. Chen, Y., et al. 2021. Therapeutic potential of TNFα and IL1β blockade for CRS/ICANS in CAR-T therapy via ameliorating endothelial activation. Front. Immunol. 12: 623610.
5. Zekri-Nechar, K., et al. 2022. Mitochondrial mitophagy protection combining rivaroxaban and aspirin in high glucose-exposed human coronary artery endothelial cell. An *in vitro* study. Diab. Vasc. Dis. Res. 19: 14791641221129877.

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.