SANTA CRUZ BIOTECHNOLOGY, INC.

TF (FL-294): sc-30201

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, coagulation factor III) is a cell surface glycoprotein that enables cells to initiate blood coagulation cascades, and it functions as a high-affinity receptor for coagulation Factor VII.

REFERENCES

1. Davie, E.W., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: F3 (human) mapping to 1p21.3; F3 (mouse) mapping to 3 G1.

SOURCE

TF (FL-294) is a rabbit polyclonal antibody raised against amino acids 1-294 representing full length TF of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TF (FL-294) is recommended for detection of tissue factor (TF) of mouse, rat and, to a lesser extent, 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), immunohistochemistry (including paraffin-embedded sections) (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 (m): sc-40415, TF siRNA (h): sc-44984, TF shRNA Plasmid (m): sc-40415-SH, TF shRNA Plasmid (h): sc-44984-SH, TF shRNA (m) Lentiviral Particles: sc-40415-V and TF shRNA (h) Lentiviral Particles: sc-44984-V.

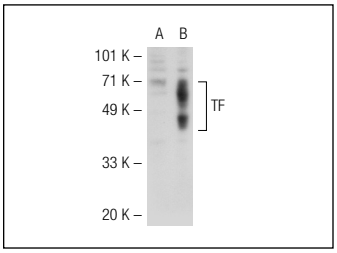
Molecular Weight of TF: 47 kDa.

Positive Controls: TF (m): 293T Lysate: sc-123995 or mouse placenta extract: sc-364247.

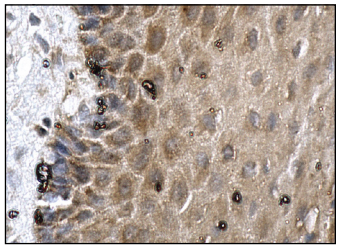
STORAGE

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

DATA



TF (FL-294): sc-30201. Western blot analysis of TF expression in non-transfected: sc-117752 (**A**) and mouse TF transfected: sc-123995 (**B**) 293T whole cell lysates.



TF (FL-294): sc-30201. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Song, D., et al. 2009. Activation of endothelial intrinsic NFκB pathway impairs protein C anticoagulation mechanism and promotes coagulation in endotoxemic mice. Blood 114: 2521-2529.
2. Bottino M.C, et al. 2010. Classical membrane progesterone receptors in murine mammary carcinomas: agonistic effects of progestins and RU-486 mediating rapid non-genomic effects. Breast Cancer Res. Treat. 126: 621-636.
3. Karlström, E., et al. 2010. RANKL induces components of the extrinsic coagulation pathway in osteoclasts. Biochem. Biophys. Res. Commun. 394: 593-599.
4. Giulianelli, S., et al. 2010. MPA-induced gene expression and stromal and parenchymal gene expression profiles in luminal murine mammary carcinomas with different hormonal requirements. Breast Cancer Res. Treat. 129: 49-67.
5. Mei, H., et al. 2010. EGFP-EGF1 protein-conjugated PEG-PLA nanoparticles for tissue factor targeted drug delivery. Biomaterials 31: 5619-5626.
6. Cerliani, J.P., et al. 2011. Interaction between FGFR-2, STAT5, and progesterone receptors in breast cancer. Cancer Res. 71: 3720-3731.
7. Shi, W., et al. 2012. A tissue factor targeted nanomedical system for thrombi-specific drug delivery. Biomaterials 33: 7643-7654.

RESEARCH USE

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