

# TF (TF9-10H10): sc-80952

## BACKGROUND

Homeostasis 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<sup>2+</sup>-dependent dimer that is essential to the blood coagulation cascade. Together with catalytic factor Xa and Ca<sup>2+</sup> 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., 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.
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.
5. Rand, M.D., et al. 1994. Platelet coagulation factor Va: the major secretory platelet phosphoprotein. *Blood* 83: 2180-2190.

## CHROMOSOMAL LOCATION

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

## SOURCE

TF (TF9-10H10) is a mouse monoclonal antibody raised against TF of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide, 1% gelatin and protein stabilizer.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

TF (TF9-10H10) is recommended for detection of TF of human and primates 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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.

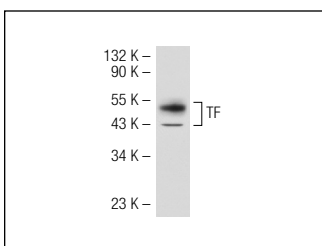
Molecular Weight of TF: 47 kDa.

Positive Controls: JEG-3 whole cell lysate: sc-364255.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

## DATA



TF (TF9-10H10): sc-80952. Western blot analysis of TF expression in JEG-3 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Roberts, G.T., et al. 2008. Microvascular injury, thrombosis, inflammation, and apoptosis in the pathogenesis of heatstroke: a study in baboon model. *Arterioscler. Thromb. Vasc. Biol.* 28: 1130-1136.
2. Xu, C., et al. 2011. Small interference RNA targeting tissue factor inhibits human lung adenocarcinoma growth *in vitro* and *in vivo*. *J. Exp. Clin. Cancer Res.* 30: 63.
3. Peng, W., et al. 2013. The effects of small interfering RNA-targeting tissue factor on an *in vitro* model of neovascularization. *Mol. Vis.* 19: 1296-1303.