

TF (E-6): sc-376361



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, Ca²⁺-dependent dimer that is essential to the blood coagulation cascade. Together with catalytic Factor Xa and Ca²⁺ 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.
6. Macedo-Ribeiro, S., et al. 1999. Crystal structures of the membrane-binding C2 domain of human coagulation Factor V. *Nature* 402: 434-439.
7. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 227400. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. LocusLink Report (LocusID: 2152). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: F3 (mouse) mapping to 3 G1.

SOURCE

TF (E-6) is a mouse monoclonal antibody raised against amino acids 1-294 representing full length TF of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TF (E-6) is recommended for detection of tissue factor (TF) of mouse 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 (m): sc-40415, TF shRNA Plasmid (m): sc-40415-SH and TF shRNA (m) Lentiviral Particles: sc-40415-V.

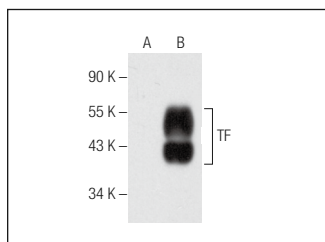
Molecular Weight of TF: 47 kDa.

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

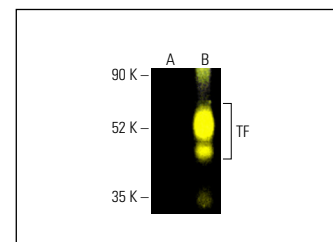
RECOMMENDED SUPPORT REAGENTS

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 (E-6): sc-376361. Western blot analysis of TF expression in non-transfected: sc-117752 (A) and mouse TF transfected: sc-123995 (B) 293T whole cell lysates.



TF (E-6): sc-376361. Fluorescent western blot analysis of TF expression in non-transfected: sc-117752 (A) and mouse TF transfected: sc-123995 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG₁ BP-CFL 488: sc-533661.

SELECT PRODUCT CITATIONS

1. Wang, L., et al. 2014. Blockage of tissue factor ameliorates the lesion of laser-induced choroidal neovascularization in mice. *Exp. Eye Res.* 127: 117-123.
2. Peng, C., et al. 2024. PCSK9 aggravated carotid artery stenosis in ApoE^{-/-} mice by promoting the expression of tissue factors in endothelial cells via the TLR4/NFκB pathway. *Biochem. Pharmacol.* 225: 116314.

RESEARCH USE

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