SANTA CRUZ BIOTECHNOLOGY, INC.

TFPI (I-20): sc-18714

BACKGROUND

The extrinsic pathway of blood coagulation is initiated by contact of plasma factor VII with tissue factor, a cellular membrane glycoprotein that normally is segregated from the bloodstream but can be exposed after tissue injury or newly synthesized in endothelial cells or leukocytes after stimulation by endotoxin and cytokines. Inhibition of Factor VIIa tissue factor activity requires a plasma component (tissue factor pathway inhibitor (TFPI), lipoprotein-associated coagulation inhibitor (LACI) or extrinsic pathway inhibitor (EPI)) and factor Xa. TFPI directly inhibits factor Xa, and, in an Xa-dependent fashion, also inhibits the Factor VIIa tissue factor catalytic complex. TFPI is a multivalent, Kunitz-type proteinase inhibitor that circulates in association with plasma lipoproteins VLDL, LDL, and HDL. TFPI-2 (also known as placental protein 5) is a related glycoprotein that was originally isolated from human placenta.

REFERENCES

1. Broze, G.J. Jr. and Miletich, J.P. 1987. Characterization of the inhibition of tissue factor in serum. Blood 69: 150-155.
2. Rao, L.V., et al. 1987. Studies of a mechanism inhibiting the initiation of the extrinsic pathway of coagulation. Blood 69: 645-651.
3. Davie, E.W., et al. 1991. The coagulation cascade: initiation, maintenance, and regulation. Biochemistry 30: 10363-10370.
4. Girard, T.J., et al. 1991. Structure of the human lipoprotein-associated coagulation inhibitor gene. Intro/exon gene organization and localization of the gene to chromosome 2. J. Biol. Chem. 266: 5036-5041.
5. Enjyoji, K., et al. 1993. Human tissue factor pathway inhibitor (TFPI) gene: complete genomic structure and localization on the genetic map of chromosome 2q. Genomics 17: 423-428.
6. Kisiel, W., et al. 1994. Evidence that a second human tissue factor pathway inhibitor (TFPI-2) and human placental protein 5 are equivalent. Blood 84: 4384-4385.

CHROMOSOMAL LOCATION

Genetic locus: Tfpi (mouse) mapping to 2 D.

SOURCE

TFPI (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TFPI 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.

Blocking peptide available for competition studies, sc-18714 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TFPI (I-20) is recommended for detection of TFPI of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

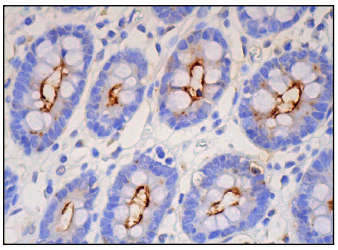
Suitable for use as control antibody for TFPI siRNA (m): sc-41061, TFPI shRNA Plasmid (m): sc-41061-SH and TFPI shRNA (m) Lentiviral Particles: sc-41061-V.

Molecular Weight of TFPI: 40 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TFPI (I-20): sc-18714. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing apical membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Wu, E., et al. 2008. Comprehensive dissection of PDGF-PDGFR signaling pathways in PDGFR genetically defined cells. PLoS ONE 3: e3794.

RESEARCH USE

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