Recombinant Human TFPI Protein

Catalog No.: RP01434

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Sequence Information

Species
Human

Gene ID
7035

Swiss Prot
P10646

Tags
C-His

Synonyms
EPI, LACI, TFI, TFPI1,TFPI,LACI,TFI, TFPI1

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
30.01 kDa

Observed MW
35-55 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Tissue factor pathway inhibitor (TFPI) is the natural inhibitor of TF coagulant and signaling activities. It is a Kunitz-type serine proteinase inhibitor that down-regulates tissue factor-initiated blood coagulation. With its Kunitz domains, TFPI exhibits significant homology with human inter-alpha-trypson inhibitor and bovin basic pancreatic trypsin inhibitor. TFPI is the natural inhibitor of TF coagulant and signaling activities. The importance of TFPI in the regulation of blood coagulation is emphasized by how its activity is modulated in human disease. In a factor (F) Xa-dependent feedback system, TFPI binds directly and inhibits the TF-FVII/FVIIa complex. Normally, TFPI exists in plasma both as a full-length molecule and as variably carboxy-terminal truncated forms. TFPI also circulates in complex with plasma lipoproteins. The levels and the dual inhibitor effect of TFPI on FXa and TF-FVII/FVIIa complex offers insight into the mechanisms of various pathological conditions triggered by TF. TFPI may play an important role in modulating TF-induced thrombogenesis and it may also provide a unique therapeutic approach for prophylaxis and/or treatment of various diseases. In addition, studies have shown that TFPI exhibits antiangiogenic and antimetastatic effects in vitro and in vivo. In animal models of experimental metastasis, both circulating and tumor cell-associated TFPI are shown to significantly reduce tumor cell-induced coagulation activation and lung metastasis.

Basic Information

Description
Recombinant Human TFPI Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp29-Lys282) of human TFPI1 (Accession #NP_006278.1) fused with a 6×His tag at the C-terminus.

Activity
Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH2. The IC50 value is <0.41 nM.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

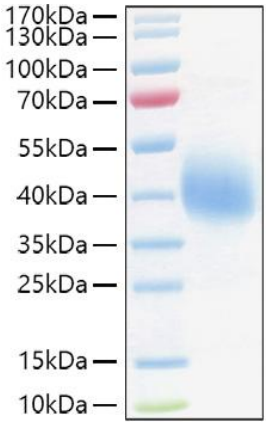
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

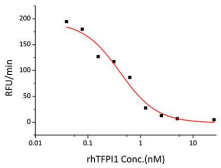
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Validation Data



Recombinant Human TFPI Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant human TFPI1 inhibits trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH2. The IC50 value is <0.41nM.