

Synonym

TFPI,LACI,TFPI1,EPI,TFI

Source

Human TFPI, His Tag (TFI-H5226) is expressed from human 293 cells (HEK293). It contains AA Asp 29 - Lys 282 (Accession # [NP_006278.1](#)).

Predicted N-terminus: Asp 29

Molecular Characterization

TFPI(Asp 29 - Lys 282)
NP_006278.1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 30.0 kDa. The protein migrates as 41-45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

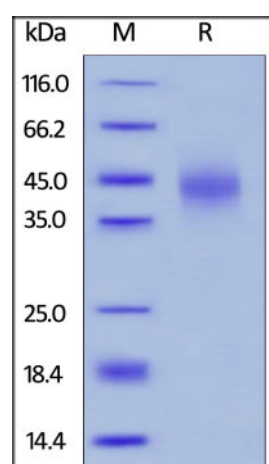
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human TFPI, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity

Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH₂ Fluorogenic MMP Substrate. The IC₅₀ value is <0.50 nM, as measured under the described conditions (QC tested).

Background

Tissue factor pathway inhibitor (TFPI) is also known as Extrinsic pathway inhibitor (EPI), Lipoprotein - associated coagulation inhibitor (LACI), is a plasma proteinase inhibitor synthesized by vascular endothelial cells and part of it is associated with glycosaminoglycans of these cells. TFPI is a single-chain polypeptide which can reversibly inhibit Factor Xa (Xa) and Thrombin (Factor IIa). TFPI is a secreted protein with a Nterminal acidic region, three Kunitz (K) domains separated with by two linker regions, and a Cterminal basic region. The first K domain inhibits coagulation factor VIIa complexed to tissue factor (TF); The second K domain inhibits factor Xa; The third K domain binds to heparin; The Cterminal basic region may have several functions. For example, it plays an important role in binding of TFPI to cell surfaces.

References

- (1) [Bajaj MS., et al., 2001, Thromb Haemost., 86:959.](#)
- (2) [Mine S., et al., 2002, Biochemistry, 41:78.](#)
- (3) [Witt I., et al., 2002, Hamostaseologie, 22:30-35.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.