

## Recombinant Human TFPI2 Protein (His Tag)

**Catalog Number:** PKSH031536

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

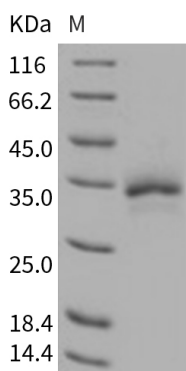
### Description

|                      |  |
|----------------------|--|
| <b>Species</b>       | Human  |
| <b>Source</b>        | HEK293 Cells-derived Human TFPI2 protein Met 1-Lys 213, with an C-terminal His   |
| <b>Calculated MW</b> | 23.2 kDa   |
| <b>Observed MW</b>   | 32-34 kDa  |
| <b>Accession</b>     | NP_006519.1  |
| <b>Bio-activity</b>  | Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH <sub>2</sub> (Anaspec, Catalog#27114). The IC <sub>50</sub> value is < 2 nM, as measured in 100µL reaction mixture containing 1. 25 ng trypsin (Sigma, Catalog#T4799), 10 µM substrate, 50 mM Tris, 10 mM CaCl <sub>2</sub> , 0.15M NaCl, 0.05% Brij-35, pH 7.5. |

### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 95 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from sterile PBS, pH 7.4<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.             |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

#### For Research Use Only

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Tissue factor pathway inhibitor-2 (TFPI2), a member of the Kunitz-type serine proteinase inhibitor family, is a structural homologue of tissue factor pathway inhibitor (TFPI). It is a 32 kDa matrix-associated glycoprotein consisting of a short amino-terminal region, three tandem Kunitz-type domains and a positively charged carboxy-terminal tail. TFPI2 inhibits plasmin-dependent activation of several metalloproteinases. TFPI2 is highly abundant in the full-term placenta and widely expressed in various adult human tissues, such as the liver, skeletal muscle, heart, kidney, and pancreas. The expression of TFPI2 in tumors is inversely related to an increasing degree of malignancy, which may suggest a role for TFPI2 in the maintenance of tumor stability and inhibition of the growth of neoplasms. TFPI2 inhibits the tissue factor/factor VIIa (TF/VIa) complex and a wide variety of serine proteinases including plasmin, plasma kallikrein, factor XIa, trypsin, and chymotrypsin. TFPI2 is involved in regulating pericellular proteases implicated in a variety of physiologic and pathologic processes including cancer cell invasion, vascular inflammation, and atherosclerosis. TFPI2 has also been shown to induce apoptosis and inhibit angiogenesis, which may contribute significantly to tumor growth inhibition.

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