



# Recombinant Human Tissue factor

20220805DS

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-158aS</b>
<b>Size:</b>	2 µg
<b>Lot. No.:</b>	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	2152
<b>Synonyms:</b>	TF, TF1, Coagulation factor III, factor III, F3, Thromboplastin, CD142

Tissue factor is a transmembrane glycoprotein of the cytokine receptor superfamily that acts as a receptor for coagulation factor VII (fVII) to trigger initiation of the coagulation cascade in response to vascular injury. Expression of tissue factor occurs constitutively within most extravascular and perivascular cells and at high levels within critical organs and tissue. Tissue factor is not normally expressed freely on the surface of circulating blood cells due to its pro-coagulant effect, but is instead stored on the surface of mononuclear and endothelial cells in microparticles that can shed into circulation in response to vascular injury, pro-inflammatory cytokines, or microbial ligands. Tissue factor can also be shed into circulation by cancer cells where its expression in a number of cancer types has been linked to tumor progression, metastatic potential, thrombosis, and angiogenesis. Expression of tissue factor has been shown to be inducible by select cytokines in a number of cell types, including IL-1 $\beta$  and TNF- $\alpha$  in vascular endothelial cells and macrophages, and TNF- $\alpha$ , IL-6, and FGF-Basic in monocytes, among others. The CHO cell-derived Recombinant Human Tissue Factor is a 227-amino-acid length glycoprotein containing a C-terminal His-Tag and has a calculated molecular weight of 25.8 kDa. Due to glycosylation, Recombinant Human Tissue Factor migrates with an apparent molecular mass of approximately 30-40 kDa by SDS-PAGE gel under reducing and non-reducing conditions.

## Sequence

```
SGTTNTVAAY NLTWKSTNFK TILEWEPKPV NQVYTVQIST  
KSGDWKSKCF YTTDTECDLT DEIVKDVKQT YLARVFSYPA  
GNVESTGSAG EPLYENSPEF TPYLETNLQQ PTIQSFEQVG  
TKVNVTVVEDE RTLVRNNTF LSLRDVFGKD LIYTLYYWKS  
SSSGKKTAKT NTNEFLIDVD KGENYCFSVQ AVIPSRVNR  
KSTDSPVECM GGEKGEFREQ HHHHHHH
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## Database References

<b>Protein RefSeq:</b>	NP_001984.1
<b>Uniprot ID:</b>	P13726
<b>mRNA RefSeq:</b>	NM_001993.4

## Product Specifications

<b>Expressed in</b>	CHO cells
<b>Purity</b>	≥ 98% by SDS-PAGE gel and HPLC analyses.
<b>Tag</b>	His-Tag, C-term
<b>Structural Information</b>	glycosylated
<b>Endotoxin level</b>	< 0.1 ng/µg of protein (<1EU/µg)
<b>Formulation</b>	Lyophilized from 10mM Tris, pH 8.0 + 50mM NaCl
<b>Length (aa):</b>	227
<b>MW:</b>	25.8 kDa

**Stability:** The lyophilized protein is stable at room temperature for 1 month and at 4°C for 3 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

**Reconstitution:** Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Functional activity of Tissue Factor is determined by its ability to activate fluorogenic peptide substrate Boc-VPR-AMC cleavage, when bound in 1:1 complex with Coagulation Factor VII.