Human Coagulation Factor III / Tissue Factor Protein, His Tag, low endotoxin (active enzyme, MALS verified)

Catalog # TF3-H52H5

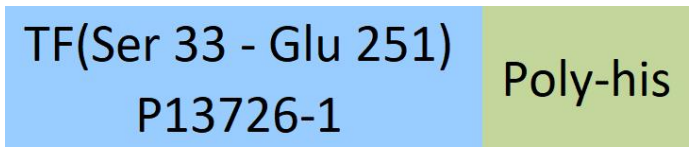
Synonym

Coagulation Factor III, Tissue Factor, TF, F3, CD142

Source

Human Tissue Factor, His Tag (TF3-H52H5) is expressed from human 293 cells (HEK293). It contains AA Ser 33 - Glu 251 (Accession # P13726-1).
Predicted N-terminus: Ser 33

Molecular Characterization



Other Tags and Version Biotin & Other Labeled Version

This protein carries a polyhistidine tag at the C-terminus.
The protein has a calculated MW of 26.7 kDa. The protein migrates as 35-45 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.
>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with trehalose as protectant.
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

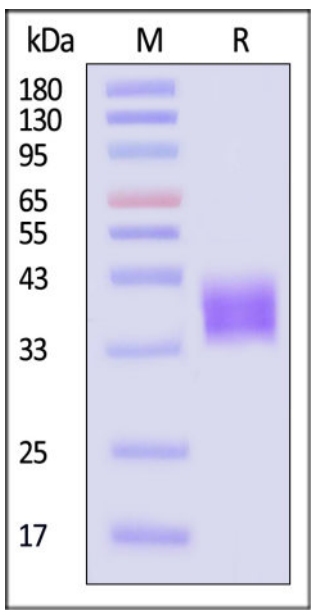
For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:

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

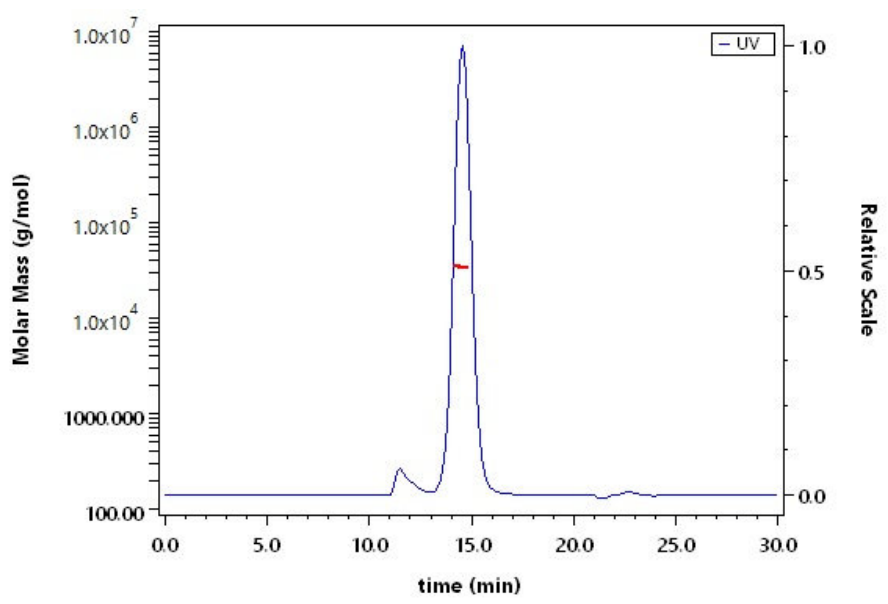
ACRO Quality Management System

- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



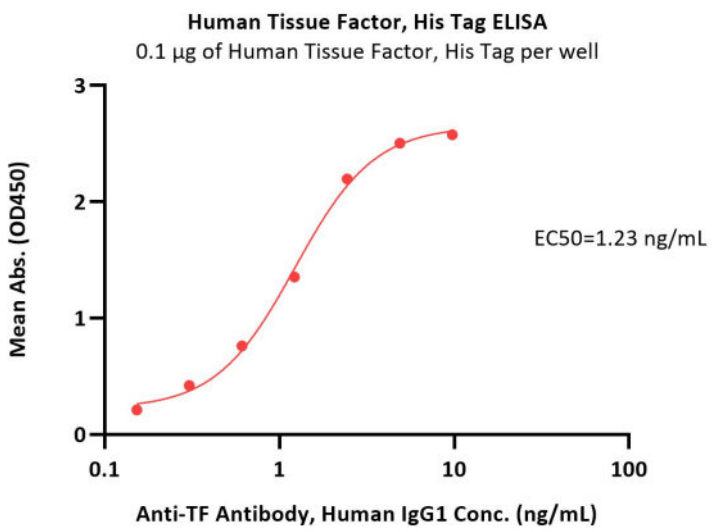
SEC-MALS

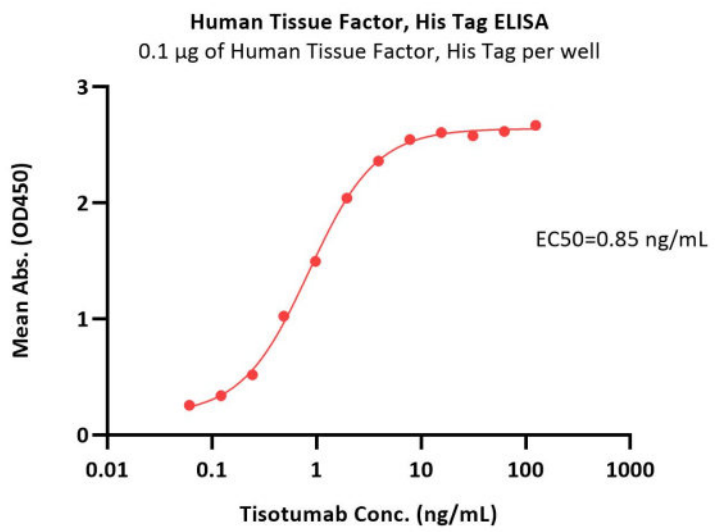


Human Tissue Factor, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

The purity of Human Tissue Factor, His Tag (Cat. No. TF3-H52H5) is more than 95% and the molecular weight of this protein is around 30-40 kDa verified by SEC-MALS.

Bioactivity-ELISA

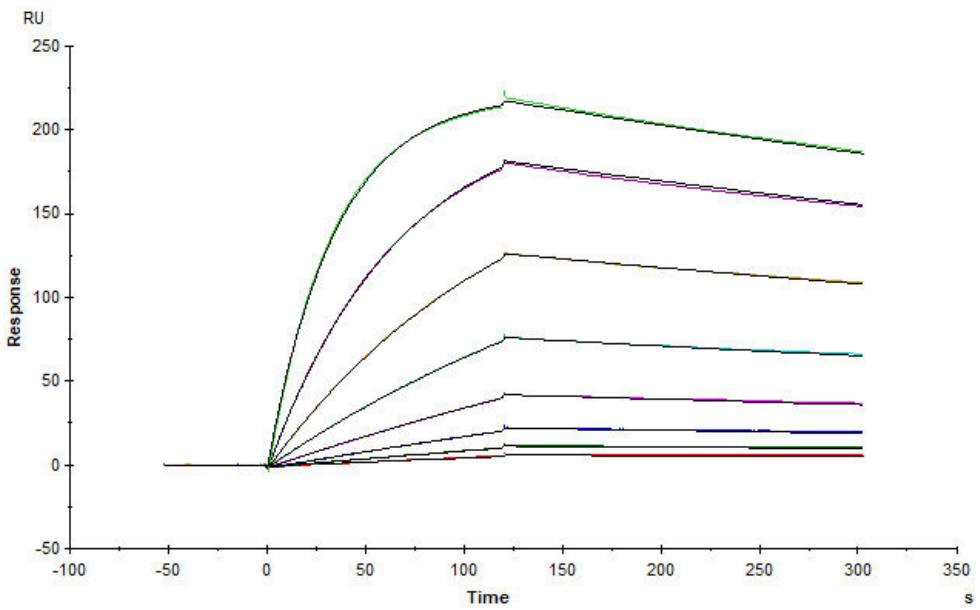




Immobilized Human Tissue Factor, His Tag (Cat. No. TF3-H52H5) at 1 μg/mL (100 μL/well) can bind Anti-TF Antibody, Human IgG1 with a linear range of 0.2-2 ng/mL (Routinely tested).

Immobilized Human Tissue Factor, His Tag (Cat. No. TF3-H52H5) at 1 μg/mL (100 μL/well) can bind Tisotumab with a linear range of 0.06-2 ng/mL (Routinely tested).

Bioactivity-SPR



Anti-TF mAb immobilized on CM5 Chip via anti-human IgG Fc antibody can bind Human Tissue Factor, His Tag (Cat. No. TF3-H52H5) with an affinity constant of 1.52 nM as determined in SPR assay (Biacore T200) (Routinely tested).

Bioactivity

Measured by its ability to activate Coagulation Factor VII in cleaving a fluorogenic peptide substrate Boc-VPR-AMC. The AC50 is <4.0 μg/mL, as measured under the described conditions (QC tested).

Background

Full-length tissue factor (TF) is a transmembrane receptor and cofactor for factor (F)VII/FVIIa. In addition to full-length TF, an alternative spliced (as) form of TF can be generated that lacks the transmembrane domain and is released fromcells. In contrast to TF, asTF has low procoagulant activity because it lacks the transmembrane domain. Tissue factor is expressed by cells around blood vessels, such as adventitial fibroblasts, and body surfaces, such as epithelial cells, and plays a critical role in hemostasis. TF also contributes to various forms of thrombosis. Many cancers, particularly adenocarcinomas, express high levels of TF. A high level of tumor TF expression is associated with poor prognosis in many types of cancers, including breast, prostate, colorectal, and pancreatic cancer.