

Recombinant Human Coagulation factor III/CD142 Protein

Catalog No.: RP00112 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	2152	P13726

Tags

C-His

Synonyms

CD142; TF; TFA;F3;TF;TFA

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

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. Contact us for customized product form or formulation.


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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

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Background

The protein is coagulation factor III which is a cell surface glycoprotein. This factor enables cells to initiate the blood coagulation cascades, and it functions as the high-affinity receptor for the coagulation factor VII. The resulting complex provides a catalytic event that is responsible for initiation of the coagulation protease cascades by specific limited proteolysis. Unlike the other cofactors of these protease cascades, which circulate as nonfunctional precursors, this factor is a potent initiator that is fully functional when expressed on cell surfaces. There are 3 distinct domains of this factor: extracellular, transmembrane, and cytoplasmic. This protein is the only one in the coagulation pathway for which a congenital deficiency has not been described. Alternate splicing results in multiple transcript variants.

Basic Information

Description

Recombinant Human Coagulation factor III/CD142 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly34-Glu251) of human Coagulation Factor III/Tissue Factor/CD142 (Accession #NP_001984.1) fused with a 6xHis tag at the C-terminus.

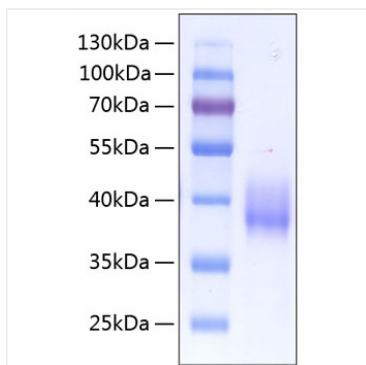
Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human CD142 at 1 μg/mL (100 μL/well) can bind Human Tissue Factor Rabbit mAb with a linear range of 0.98-61.71 ng/mL. 2. Measured by its ability to activate Coagulation Factor VII in cleaving a fluorogenic peptide substrate Boc-VPR-AMC. The AC50 is <24.0 μg/mL.

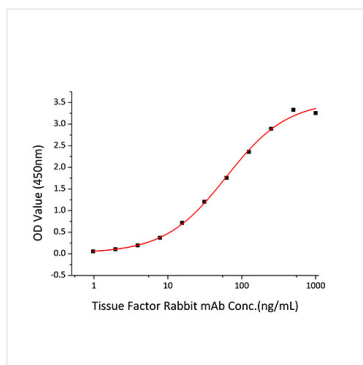
Storage

Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

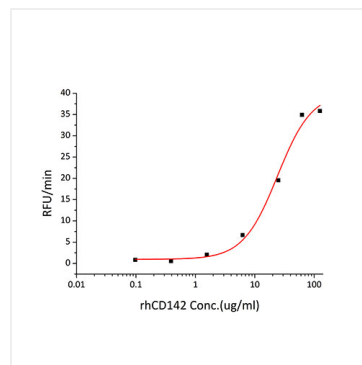
Validation Data



Recombinant Human Coagulation factor III/CD142 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 37-45 kDa.



Immobilized Human CD142 at 1 μ g/mL (100 μ L/well) can bind Human Tissue Factor Rabbit mAb with a linear range of 0.98-61.71 ng/mL.



Recombinant Human Coagulation Factor III activate Coagulation Factor VII in cleaving a fluorogenic peptide substrate Boc-VPR-AMC. The AC50 is <24.0 μ g/mL.