

Coagulation Factor II (F2) Active Protein | F2 active protein

Active Coagulation Factor II (F2)

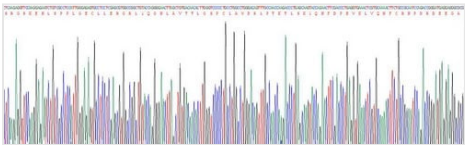
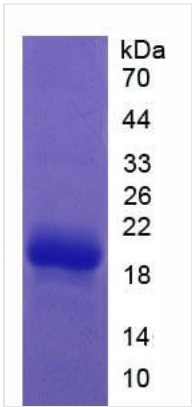
CATALOG # AAA148183	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Coagulation Factor II (F2); Active Coagulation Factor II (F2); FII; TM; PT; Thrombin; Prothrombin; Pro-Thrombin; Activation peptide fragment 1; Activation peptide fragment 2; F2 active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>95%
Form/Format	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Concentration	Original Concentration: 250ug/mL (varies by lot)
Applicable Applications for F2 active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Ser201~Arg323
Tags	N-terminal His-tag
Predicted isoelectric point	4.9
Phenomenon explanation	The possible reasons that the actual band size differs from the predicted are as follows: 1. Splice variants: Alternative splicing may create different sized proteins from the same gene. 2. Relative charge: The composition of amino acids may affects the charge of the protein. 3. Post-translational modification: Phosphorylation, glycosylation, methylation etc. 4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form. 5. Polymerization of the target protein: Dimerization, multimerization etc.
Usage	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



Gene Sequence
Gene Sequencing (extract)

SDS-PAGE
Sample: Active recombinant F2, Human

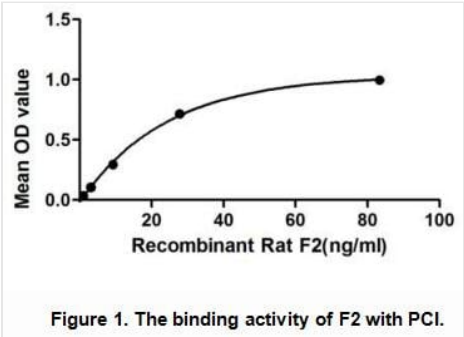


Figure 1. The binding activity of F2 with PCI.

Activity
Coagulation Factor II (F2) also commonly called pro-thrombin is a coagulation protein in the blood stream that has many effects in the coagulation cascade. It is a serine protease that converts fibrinogen to fibrin and activates factors V, VII, VIII, XIII, and, in complex with thrombomodulin, protein C. Besides, Protein C Inhibitor (PCI) has been identified as an interactor of F2, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat F2 and recombinant rat PCI. Briefly, F2 were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to PCI-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-F2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of of F2 and PCI was shown in Figure 1, and this effect was in a dose dependent manner.

ADDITIONAL INFORMATION

Product Categories/Family for F2 active protein	Signal transduction; Hematology
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NCBI AND UNIPROT INFORMATION

NCBI GI #	135809
NCBI GeneID	29251
UniProt Accession #	P18292
Molecular Weight	Predicted Molecular Mass: 14.4kDa Accurate Molecular Mass: 20kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	Prothrombin
NCBI Official Synonym Full Names	coagulation factor II

NCBI Official Symbol	F2
NCBI Protein Information	prothrombin
UniProt Protein Name	Prothrombin
UniProt Gene Name	F2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-homo-sapiens-human-active-protein/coagulation-factor-ii-f2/148183>