

Recombinant Rat F2 Protein, His-tagged

Cat. No. F2-366R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat F2 (NP_075213.2) (Met1-Arg617) was expressed with a polyhistidine tag at the C-terminus.
Species	Rat
Source	HEK293
ProteinLength	Met1-Arg617
Description	Coagulation Factor II Protein (FII, F2 Protein or Prothrombin) is proteolytically cleaved to form thrombin in the first step of the coagulation cascade which ultimately results in the stemming of blood loss. Coagulation Factor II Protein (FII, F2 Protein) also plays a role in maintaining vascular integrity during development and postnatal life. Prothrombin / Coagulation Factor II is activated on the surface of a phospholipid membrane that binds the amino end of prothrombin / Coagulation Factor II and factor Va and Xa in Ca-dependent interactions; factor Xa removes the activation peptide and cleaves the remaining part into light and heavy chains. The activation process starts slowly because factor V itself has to be activated by the initial, small amounts of thrombin. Prothrombin / Coagulation Factor II is expressed by the liver and secreted in plasma. Defects in prothrombin / Coagulation Factor II are the cause of factor II deficiency (FA2D). It is a very rare blood coagulation disorder characterized by muc cutaneous spontaneous bleeding symptoms. The severity of the bleeding manifestations correlates with blood factor II levels. Defects in Coagulation Factor II are also a cause of susceptibility to thrombosis. It is a multifactorial disorder

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of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation.

Predicted N Terminal Gln 25

Form Lyophilized from sterile PBS, pH 7.4. Normally 5 %- 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Molecular Mass The recombinant rat F2 consists of 604 amino acids and predicts a molecular mass of 69.5 kDa.

Endotoxin < 1.0 EU per µg protein as determined by the LAL method.

Purity > 90 % as determined by SDS-PAGE.

Storage Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Official Symbol F2

Synonyms F2;coagulation factor II;prothrombin;coagulation factor 2;thrombin

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