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## Summary

<b>Production Name</b>	Prothrombin Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	F2
<b>Alternative Names</b>	F2; Prothrombin; Coagulation factor II
<b>Gene ID</b>	2147.0
<b>SwissProt ID</b>	P00734.Synthesized peptide derived from the Internal region of human Prothrombin. AA range 420-470

## Application

<b>Dilution Ratio</b>	WB 1:500 - 1:2000. IHC-p: 1:100-300 ELISA: 1:20000.. IF 1:50-200
<b>Molecular Weight</b>	70kD

## Background

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**Catalog #: APRab16534**



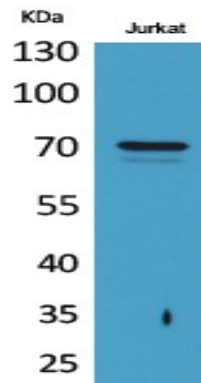
Coagulation factor II is proteolytically cleaved to form thrombin in the first step of the coagulation cascade which ultimately results in the stemming of blood loss. F2 also plays a role in maintaining vascular integrity during development and postnatal life. Peptides derived from the C-terminus of this protein have antimicrobial activity against *E. coli* and *P. aeruginosa*. Mutations in F2 lead to various forms of thrombosis and dysprothrombinemia. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015],catalytic activity:Selective cleavage of Arg-|-Gly bonds in fibrinogen to form fibrin and release fibrinopeptides A and B.,disease:Defects in F2 are the cause of various forms of dysprothrombinemia [MIM:176930].,disease:Genetic variations in F2 may be a cause of susceptibility to ischemic stroke [MIM:601367]; also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors.,function:Thrombin, which cleaves bonds after Arg and Lys, converts fibrinogen to fibrin and activates factors V, VII, VIII, XIII, and, in complex with thrombomodulin, protein C. Functions in blood homeostasis, inflammation and wound healing.,miscellaneous:It is not known whether 1 or 2 smaller activation peptides, with additional cleavage after Arg-314, are released in natural blood clotting.,miscellaneous:Prothrombin is activated on the surface of a phospholipid membrane that binds the amino end of prothrombin and factors 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.,miscellaneous:The cleavage after Arg-198, observed in vitro, does not occur in plasma.,miscellaneous:Thrombin can itself cleave the N-terminal fragment (fragment 1) of the prothrombin, prior to its activation by factor Xa.,online information:Thrombin entry,pharmaceutical:The peptide TP508 also known as Chrysalin (Orthologic) could be used to accelerate repair of both soft and hard tissues.,PTM:The gamma-carboxyglutamyl residues, which bind calcium ions, result from the carboxylation of glutamyl residues by a microsomal enzyme, the vitamin K-dependent carboxylase. The modified residues are necessary for the calcium-dependent interaction with a negatively charged phospholipid surface, which is essential for the conversion of prothrombin to thrombin.,similarity:Belongs to the peptidase S1 family.,similarity:Contains 1 Gla (gamma-carboxy-glutamate) domain.,similarity:Contains 1 peptidase S1 domain.,similarity:Contains 2 kringle domains.,tissue specificity:Expressed by the liver and secreted in plasma.,

## Research Area

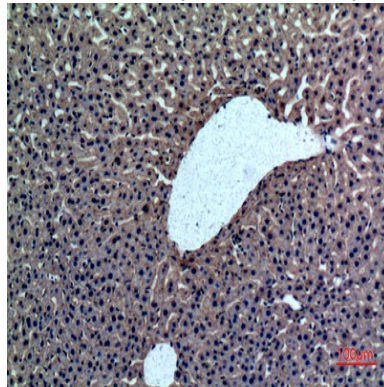
Neuroactive ligand-receptor interaction;Complement and coagulation cascades;Regulates Actin and Cytoskeleton;

## Image Data

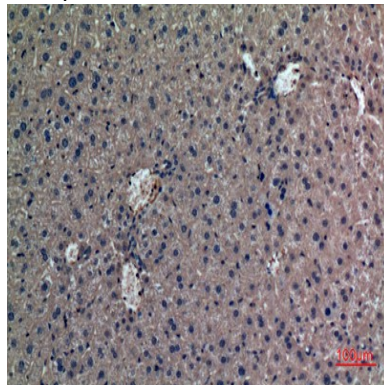
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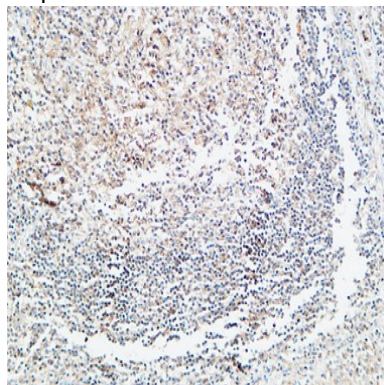
Western Blot analysis of Jurkat cells using Prothrombin Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded rat-liver, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded mouse-liver, antibody was diluted at 1:100

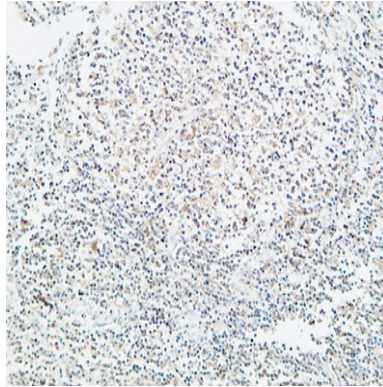


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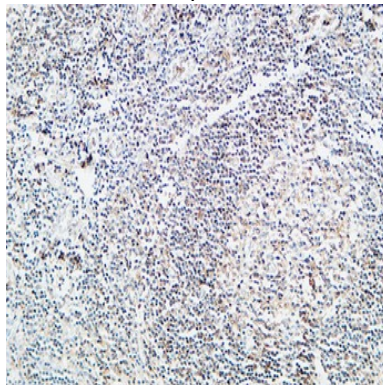


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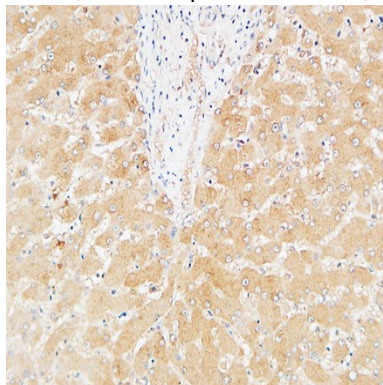
Immunohistochemical analysis of paraffin-embedded Human Amygdala. 1, Antibody was diluted at 1:200 (4°,overnight) . 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200 (room temperature, 30min) .



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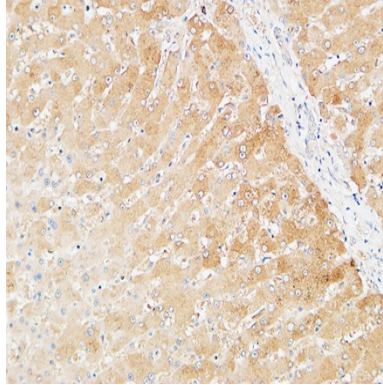


Immunohistochemical analysis of paraffin-embedded Human Liver. 1, Antibody was diluted at 1:200 (4°,overnight) . 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at

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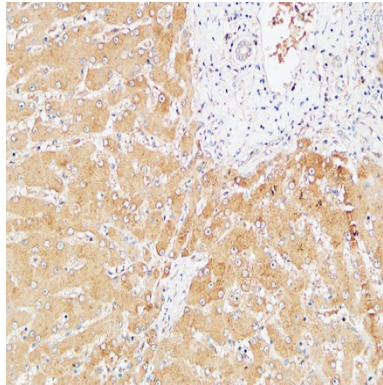


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## **Note**

For research use only.