

Rabbit Anti-F2 antibody

SL1037R

Product Name F2

Chinese Name 异常凝血酶原/脱- γ -羧基凝血酶原抗体

Alias Des-gamma-carboxy (abnormal)prothrombin; Des-Gamma-carboxy-prothrombin; coagulation factor II (thrombin); Coagulation factor II; DCP; Factor II; Prepro coagulation factor II; Prothrombin; prothrombin B-chain; PT; RPRGL2; serine protease; THPH1; THRB; THRB_HUMAN; Thrombin heavy chain.

Research Area Tumour

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat,

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/test
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 70kDa

Cellular localization cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human Prothrombin

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

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Des-gamma carboxyprothrombin (DCP), also known as protein induced by vitamin K absence/antagonist-II (PIVKA-II), is an abnormal form of the coagulation protein, prothrombin. Normally, the prothrombin precursor undergoes post-translational carboxylation (addition of a carboxylic acid group) by gamma-glutamyl carboxylase in the liver prior to secretion into plasma. DCP/PIVKA-II may be detected in people with deficiency of vitamin K (due to poor nutrition or malabsorption) and in those taking warfarin or other medication that inhibits the action of vitamin K.

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.

Subunit:

Heterodimer (named alpha-thrombin) of a light and a heavy chain; disulfide-linked. Forms a heterodimer with SERPINA5.

Subcellular Location:

Secreted, extracellular space.

Product Detail

Tissue Specificity:

Expressed by the liver and secreted in plasma.

Post-translational modifications:

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.

N-glycosylated. N-glycan heterogeneity at Asn-121: Hex3HexNAc3 (minor), Hex4HexNAc3 (minor) and Hex5HexNAc4 (major). At Asn-143: Hex4HexNAc3 (minor) and Hex5HexNAc4 (major).

Factor II deficiency (FA2D) [MIM:613679]: A very rare blood coagulation disorder characterized by mucocutaneous bleeding symptoms. The severity of the bleeding manifestations correlates with blood factor II levels. Note=The disease is caused by mutations affecting the gene represented in this entry.

Ischemic stroke (ISCHSTR) [MIM:601367]: 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. Note=Disease susceptibility is associated with variations affecting the gene represented in this

Thrombophilia due to thrombin defect (THPH1) [MIM:188050]: A multifactorial

disorder of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation. Note=The disease is caused by mutations affecting the gene represented in this entry. A common genetic variation in the 3-prime untranslated region of the prothrombin gene is associated with elevated plasma prothrombin levels and an increased risk of venous thrombosis.

Pregnancy loss, recurrent, 2 (RPRGL2) [MIM:614390]: A common complication of pregnancy, resulting in spontaneous abortion before the fetus has reached viability. The term includes all miscarriages from the time of conception until 24 weeks of gestation. Recurrent pregnancy loss is defined as 3 or more consecutive spontaneous abortions. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.

Similarity:

Belongs to the peptidase S1 family.

Contains 1 Gla (gamma-carboxy-glutamate) domain.

Contains 2 kringle domains.

Contains 1 peptidase S1 domain.

SWISS:

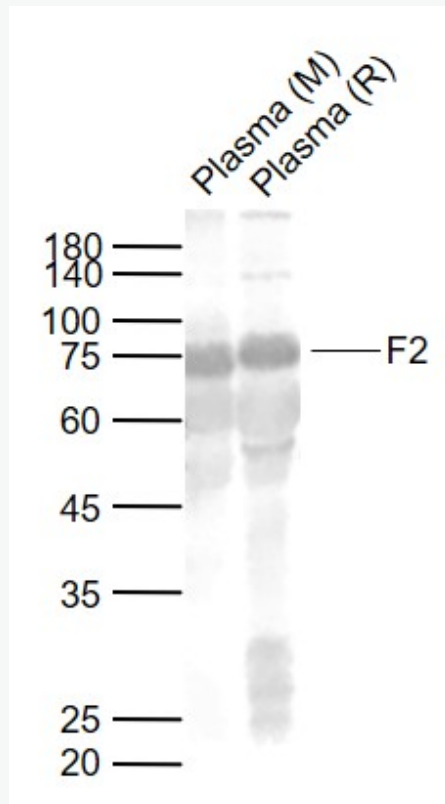
P00734

Gene ID:

2147

正常肝细胞中，在内质网内可将 DCP 羧化使之成为有活性的凝血酶原，一旦机体需要，凝血酶原即可转变成凝血酶参与机体的各项生理功能，当有 Tumour 细胞发生时，DCP 明显升高。DCP 主要用于肝癌方面的研究；有学者认为：联合应用 DCP 和 AFP 对于早期诊断 HCC（原发性肝细胞癌）有较大的帮助。

**Product
Picture**



Sample:

Lane 1: Plasma (Mouse) at 30 ug

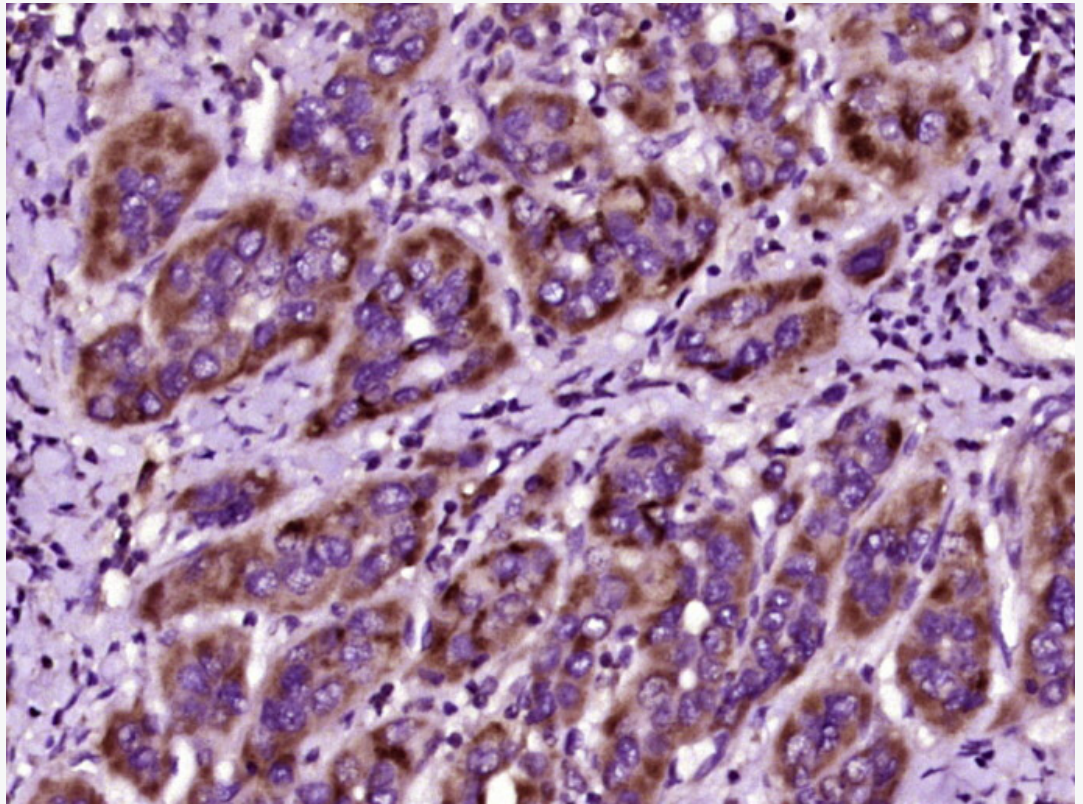
Lane 2: Plasma (Rat) at 30 ug

Primary: Anti-F2 (SL1037R) at 1/1000 dilution

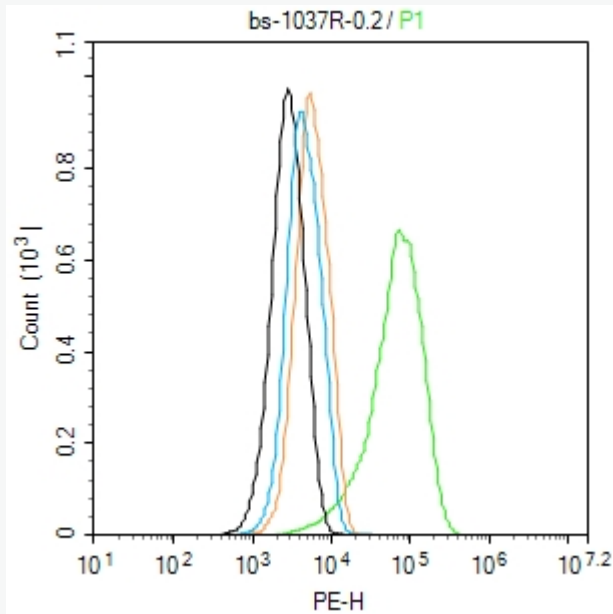
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 70 kD

Observed band size: 75 kD



Paraformaldehyde-fixed, paraffin embedded (human liver carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (DCP) Polyclonal Antibody, Unconjugated (SL1037R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control: Raji.

Primary Antibody (green line): Rabbit Anti-DCP antibody (SL1037R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

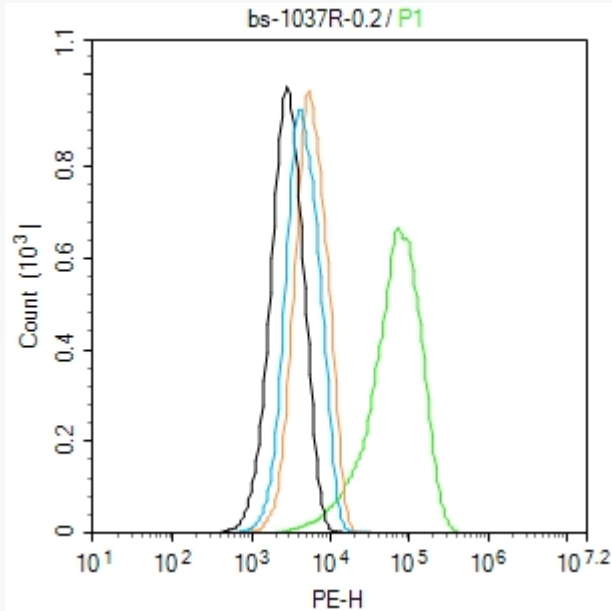
Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.



Blank control: Raji.

Primary Antibody (green line): Rabbit Anti-DCP antibody (SL1037R)

Dilution: 1 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: 1 μ g /test.

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