SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-Thrombin heavy chain antibody

SL1914R

Product Name:	Thrombin heavy chain
Chinese Name:	凝血酶(凝血因子II)重链抗体
Alias:	coagulation factor II; prothrombin; F2; Cf-2; Cf2; FII; F 2; coagulation factor II (thrombin); Coagulation factor II; Coagulation factor II precursor; F2; Factor II; Factor-II; Prothrombin; prothrombin B-chain; PT; serine protease; THRB; THRB_HUMAN; Thrombin; Thrombin heavy chain.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,Cow,Horse,Rabbit,Fish,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	28/68kDa
Cellular localization:	Extracellular matrixSecretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Thrombin heavy chain:551-622/622
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Thrombin is the final protease in the blood coagulation cascade and serves both pro- and anticoagulant functions through the cleavage of several targets. The ability of thrombin to specifically recognize a wide range of substrates derives from interactions which

occur outside of the active site of thrombin. Thrombin possesses two anion binding exosites which mediate many of its interactions with cofactors and substrates, and although many structures of thrombin have been solved, few such interactions have been described in molecular detail. Glycosaminoglycan binding to exosite II of thrombin plays a major role in switching off the procoagulant functions of thrombin by mediating its irreversible inhibition by circulating serpins and by its binding to the endothelial cell surface receptor thrombomodulin.

Function:
Thrombin is an active enzyme in the earliest steps of the blood clot formation, generated from its circulating inactive precursor prothrombin. Thrombin is a glycoprotein formed by two peptides chains of 36 and 259 amino acids linked by disulfure bonds. Three important sites have been identified on the surface of the enzyme: The catalytic site that confers to the molecule its serine protease activity, the exosite one responsible for the binding of the substrate (fibrinogen or thrombin receptor) and the exosite two responsible for the binding of antithrombin III and inactivation of thrombin. Gamma Thrombin is a proteolyzed form of Alpha Thrombin. Gamma Thrombin consists of four chains (A, B1, B5, B4) with a disulfide link between the A peptide and the B5 peptide.

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

Subcellular Location:
Secreted, extracellular space.

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).

DISEASE:
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 entry.
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

Database links:

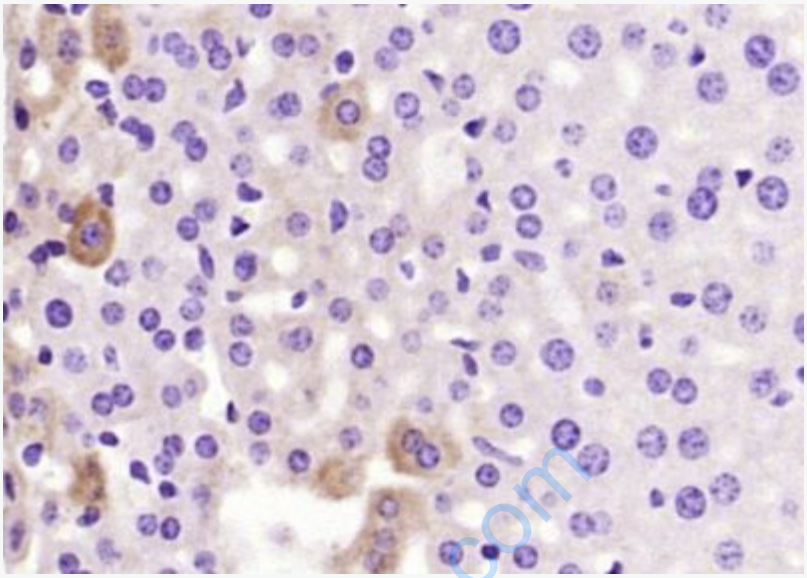
Entrez Gene: 2147Human

Omim: 176930Human

SwissProt: P00734Human

Unigene: 655207Human

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

Picture:	 Paraformaldehyde-fixed, paraffin embedded (mouse liver tissue); 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 (Thrombin heavy chain) Polyclonal Antibody, Unconjugated (SL1914R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.