Product name:	Cleaved-Thrombin APII (R327) Rabbit Polyclonal Antibody
Cat number:	ABN09032
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human THRB. AA range:278-327
Reactivity:	Human,Rat,Mouse
Applications:	WB 1:500-1:2000,ELISA 1:10000-1:20000
Molecular Weight:	19kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

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.,