abcam

Product datasheet

Anti-Prothrombin antibody [EPR20131] - BSA and Azide free ab251497

Recombinant RabMAb

6 Images

Overview

Product name	Anti-Prothrombin antibody [EPR20131] - BSA and Azide free
Description	Rabbit monoclonal [EPR20131] to Prothrombin - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
General notes	ab251497 is the carrier-free version of **ab208590**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20131
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab251497 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

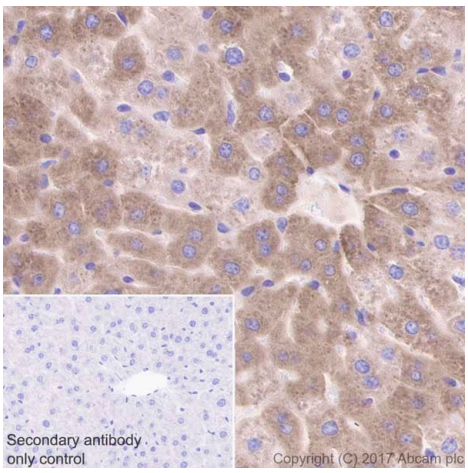
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 72, 48, 33 kDa (predicted molecular weight: 70 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

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.
Tissue specificity	Expressed by the liver and secreted in plasma.
Involvement in disease	Defects in F2 are the cause of factor II deficiency (FA2D) [MIM:613679]. It is a very rare blood coagulation disorder characterized by mucocutaneous bleeding symptoms. The severity of the bleeding manifestations correlates with blood factor II levels. Genetic variations in F2 may be a cause of susceptibility to ischemic stroke (ISCHSTR) [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. Defects in F2 are a cause of susceptibility to thrombosis (THR) [MIM:188050]. It is a multifactorial disorder of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation. Note=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.

Sequence similarities	Belongs to the peptidase S1 family. Contains 1 Gla (gamma-carboxy-glutamate) domain. Contains 2 kringle domains. Contains 1 peptidase S1 domain.
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.
Cellular localization	Secreted > extracellular space.
Form	Cleaved into the following 4 chains: 1. Activation peptide fragment 1 2. Activation peptide fragment 2 3. Thrombin light chain 4. Thrombin heavy chain

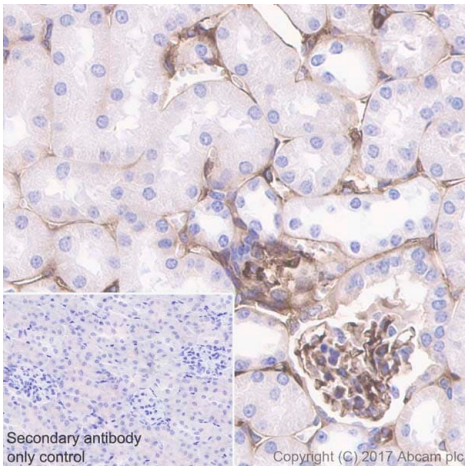
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

This data was developed using **ab208590**, the same antibody clone in a different buffer formulation.

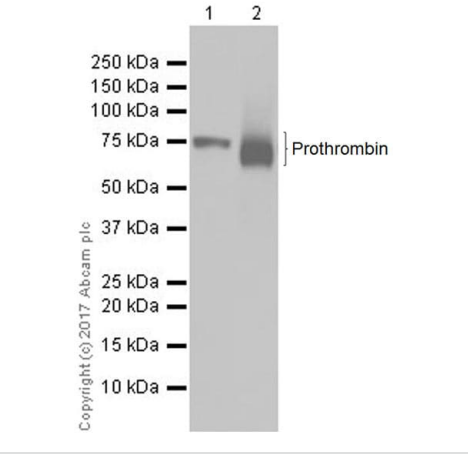
Immunohistochemical analysis of paraffin-embedded mouse liver tissue labeling Prothrombin with **ab208590** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining on mouse liver was observed (PMID: 1705822). Counter stained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

This data was developed using **ab208590**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling Prothrombin with **ab208590** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on plasma and endothelial cells of human kidney was observed (PMID: 16410745). Counter stained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

All lanes : Anti-Prothrombin antibody [EPR20131] (**ab208590**) at 1/1000 dilution

Lane 1 : Mouse liver lysate
Lane 2 : Rat liver lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

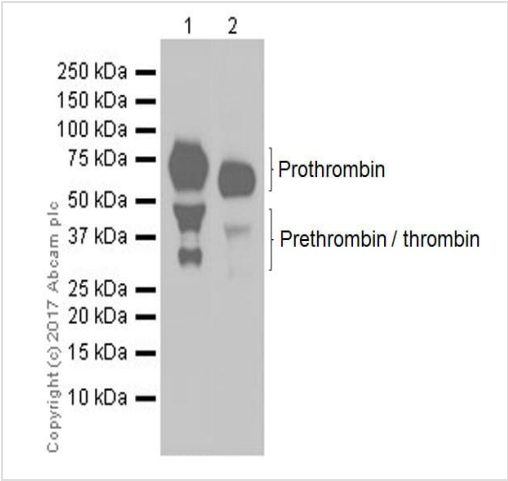
Developed using the ECL technique.

Predicted band size: 70 kDa
Observed band size: 72 kDa

Exposure time: 10 seconds

This data was developed using **ab208590**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

All lanes : Anti-Prothrombin antibody [EPR20131] (**ab208590**) at 1/1000 dilution

Lane 1 : Mouse plasma

Lane 2 : Rat plasma

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 70 kDa

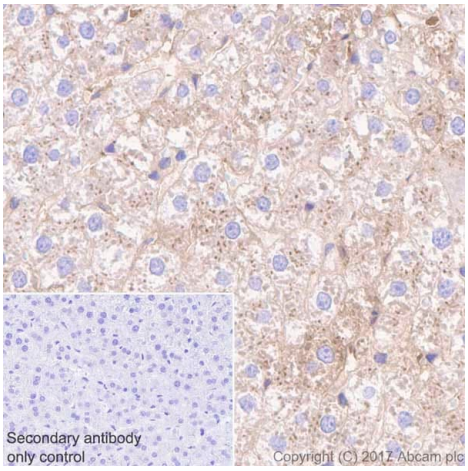
Observed band size: 33,48,72 kDa

Exposure time: 15 seconds

This data was developed using **ab208590**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.

Prothrombin is proteolytically cleaved into different fragments. The fragment profile is consistent with the literature (PMID: 17637839; 21131592; 16734589).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

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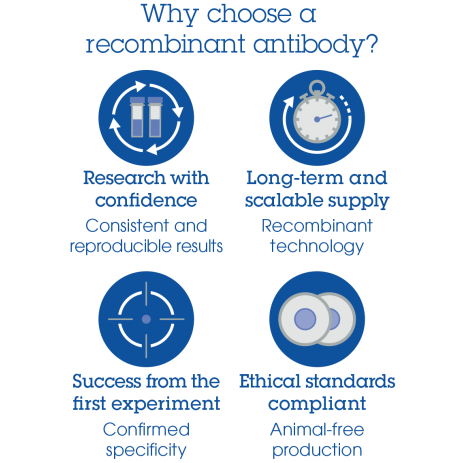
Immunohistochemical analysis of paraffin-embedded rat liver tissue labeling Prothrombin with **ab208590** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining on rat liver was observed (PMID: 1705822). Counter stained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Anti-Prothrombin antibody [EPR20131] - BSA and Azide free (ab251497)

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