10320 Camino Santa Fe, Suite G
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Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9)

Catalog # ABO15116

Specification

Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Product Information

Application	**WB, IHC**
Primary Accession	P00734
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Human**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) . Tested in IHC, WB applications. This antibody reacts with Human.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Additional Information

Gene ID 2147

Other Names
Prothrombin, 3.4.21.5, Coagulation factor II, Activation peptide fragment 1, Activation peptide fragment 2, Thrombin light chain, Thrombin heavy chain, F2

Calculated MW
70 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E. coli-derived human Prothrombin recombinant protein (Position: Y97-R124).

Purification
Immunogen affinity purified.

Storage	**At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.**

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Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Protein Information

Name F2

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. Activates coagulation factor XI (F11); activation is promoted by the contact with negatively charged surfaces (PubMed:2019570, PubMed:21976677). Triggers the production of pro- inflammatory cytokines, such as MCP-1/CCL2 and IL8/CXCL8, in endothelial cells (PubMed:30568593, PubMed:9780208).

Cellular Location
Secreted, extracellular space.

Tissue Location
Expressed by the liver and secreted in plasma.

Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Images

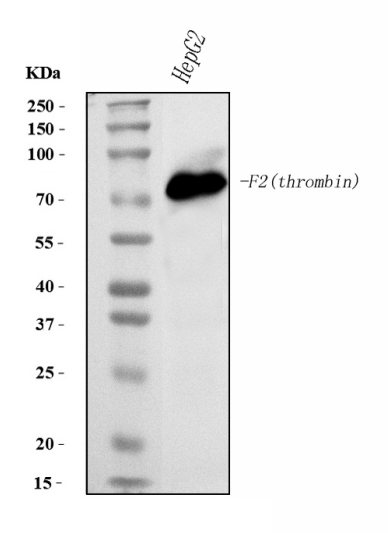

Figure 1. Western blot analysis of Prothrombin using anti-Prothrombin antibody (M00044-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Prothrombin antigen affinity purified monoclonal antibody (Catalog # M00044-2) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Prothrombin at approximately 70 kDa. The expected band size for Prothrombin is at 70 kDa.

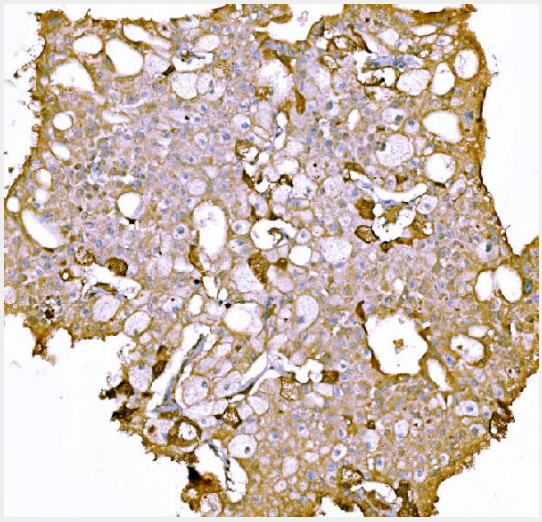

Figure 2. IHC analysis of Prothrombin using anti-Prothrombin antibody (M00044-2).
Prothrombin was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Prothrombin Antibody (M00044-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

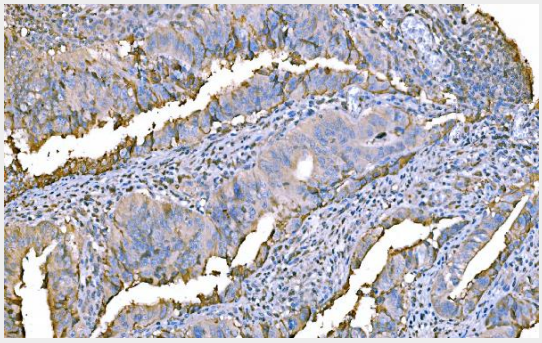

Figure 3. IHC analysis of Prothrombin using anti-Prothrombin antibody (M00044-2).
Prothrombin was detected in a paraffin-embedded section of human colorectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Prothrombin Antibody (M00044-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue

section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

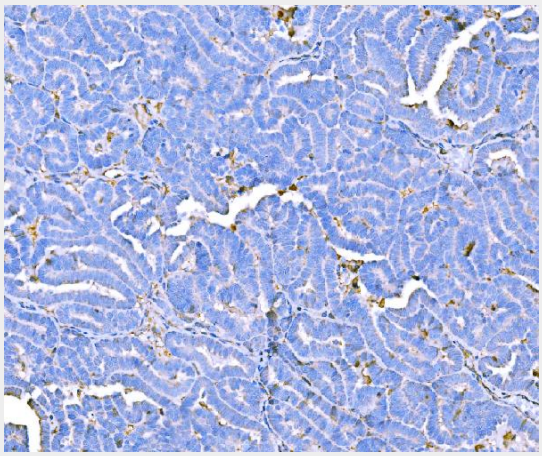

Figure 4. IHC analysis of Prothrombin using anti-Prothrombin antibody (M00044-2).
Prothrombin was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Prothrombin Antibody (M00044-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Anti-Prothrombin Antibody Picoband™ (monoclonal, 4G13G9) - Background

F2 (Coagulation Factor II), also known as thrombin, is a serine protease that in humans is encoded by the F2 gene. This gene for human prothrombin (F2) was assigned to chromosome 11p11-q12 by analysis of a panel of somatic cell hybrid DNAs and by in situ hybridization, using both cDNA and genomic probes. The activated thrombin enzyme plays an important role in hemostasis and thrombosis: it converts fibrinogen to fibrin for blood clot formation, stimulates platelet aggregation, and activates coagulation factors V, VIII (F8), and XIII (F13A1). Thrombin also inhibits coagulation by activating protein C.