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antibody and ELISA experts

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Anti-RPA70 RPA1 Antibody Picoband® (monoclonal, 11H4)

Catalog Number: M01317-2

About RPA1

Replication protein A 70 kDa DNA-binding subunit is a protein that in humans is encoded by the RPA1 gene. This gene is mapped to chromosome 17p13.3. Replication protein A (RPA) is a heterotrimeric single-strand DNA (ssDNA)-binding protein essential for DNA replication, repair, and recombination. It is composed of 70-kD (RPA1), 32-kD (RPA2), and 14-kD (RPA3) subunits. The RPA1 subunit is responsible for high-affinity ssDNA binding. The RPA complex was originally isolated as a factor essential for in vitro replication of the papovavirus SV40. It had been found that recombinant human RPA1, purified from bacteria, exhibited ssDNA-binding activity comparable to that of the complete RPA complex. RPA1 could substitute for the complete complex in stimulating the activity of DNA polymerase alpha-primase, but it could not substitute for the complete complex in SV40 DNA replication in vitro, suggesting an important functional role for the other subunits.

Overview

Product Name	Anti-RPA70 RPA1 Antibody Picoband® (monoclonal, 11H4)
Reactive Species	Human, Monkey, Mouse
Description	Boster Bio Anti-RPA70 RPA1 Antibody Picoband® (monoclonal, 11H4) catalog # M01317-2. Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human, Monkey, Mouse. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, WB
Clonality	Monoclonal 11H4
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Mouse
Uniprot ID	P27694

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human RPA70, different from the related mouse sequence by three amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunofluorescence, 2ug/ml Flow Cytometry (Fixed), 1-3ug/1x10^6 cells

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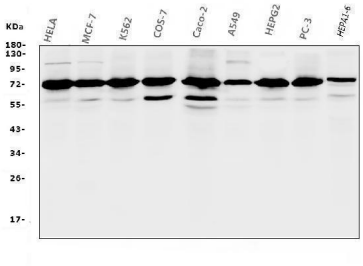
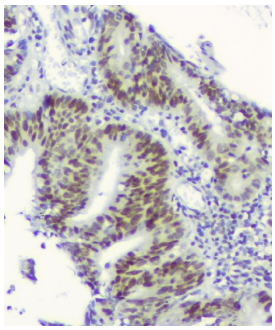
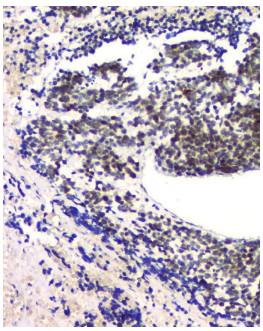
Anti-RPA70 RPA1 Antibody Picoband® (monoclonal, 11H4) (M01317-2) Images



Western blot analysis of RPA70 using anti-RPA70 antibody (M01317-2). 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 50ug of sample under reducing conditions. Lane 1: HELA whole cell lysates, Lane 2: MCF-7 whole cell lysates, Lane 3: K562 whole cell lysates, Lane 4: COS-7 whole cell lysates, Lane 5: Caco-2 whole cell lysates, Lane 6: A549 whole cell lysates, Lane 7: HEPG2 whole cell lysates, Lane 8: PC-3 whole cell lysates, Lane 9: HEPA1-6 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-RPA70 antigen affinity purified monoclonal antibody (Catalog # M01317-2) at 0.5 ug/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 1:5000 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 RPA70 at approximately 12KD. The expected band size for RPA70 is at 12KD.



IHC analysis of RPA70 using anti-RPA70 antibody (M01317-2). RPA70 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-RPA70 Antibody (M01317-2) 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.



IHC analysis of RPA70 using anti-RPA70 antibody (M01317-2). RPA70 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-RPA70 Antibody (M01317-2) 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.

IHC analysis of RPA70 using anti-RPA70 antibody (M01317-2). RPA70 was detected in paraffin-embedded

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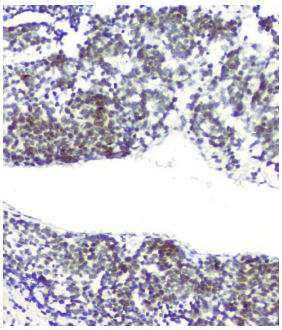
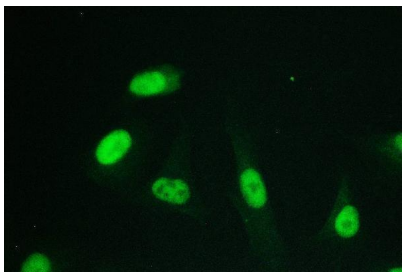
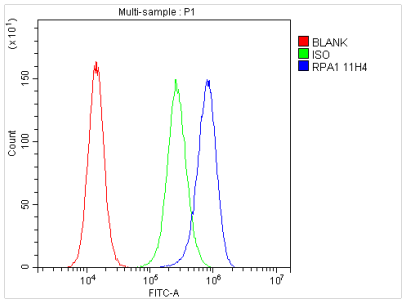


section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-RPA70 Antibody (M01317-2) overnight at 4°C. Biotinylated 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.



IF analysis of RPA70 using anti-RPA70 antibody (M01317-2). RPA70 was detected in immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-RPA70 Antibody (M01317-2) overnight at 4°C. DyLight488 Conjugated Goat Anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



6. Flow Cytometry analysis of A431 cells using anti-RPA70 antibody (M01317-2).Overlay histogram showing A431 cells stained with M01317-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-RPA70 Antibody (M01317-2,1ug/1x106 cells) for 30 min at 20°C. DyLight488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-RPA70 RPA1 Antibody (monoclonal, 11H4)

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