

Anti-CPI17 alpha/PPP1R14A Antibody Picoband™

Catalog Number: A05752-1

About PPP1R14A

Protein phosphatase 1 regulatory subunit 14A, also known as CPI-17, is a protein that in humans is encoded by the PPP1R14A gene. This protein is an inhibitor of smooth muscle myosin phosphatase, and has higher inhibitory activity when phosphorylated. Inhibition of myosin phosphatase leads to increased myosin phosphorylation and enhanced smooth muscle contraction. Alternatively spliced transcript variants encoding different isoforms have been noted for this gene.

Overview

Product Name	Anti-CPI17 alpha/PPP1R14A Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CPI17 alpha/PPP1R14A Antibody Picoband™ catalog # A05752-1. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
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	Rabbit
Uniprot ID	Q96A00

Technical Details

Immunogen	E.coli-derived human CPI17 alpha recombinant protein (Position: L30-Q126). Human CPI17 alpha shares 83.5% and 84.5% amino acid (aa) sequence identity with mouse and rat CPI17 alpha, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.

Suggested Dilutions

Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

Boster Bio's internal QC testing used:

Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat

Immunocytochemistry/Immunofluorescence, 2ug/ml, Human

Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-CPI17 alpha/PPP1R14A Antibody Picoband™ (A05752-1) Images

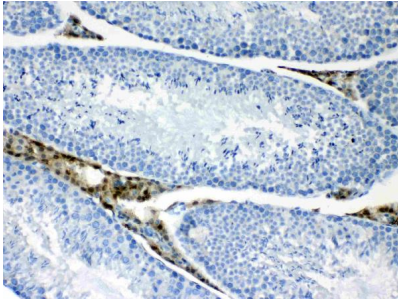


Figure 2. IHC analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

CPI17 alpha was detected in paraffin-embedded section of mouse testis tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

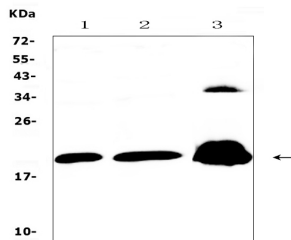


Figure 1. Western blot analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

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: rat brain tissue lysates,
Lane 2: mouse brain tissue lysates,
Lane 3: PANC-1 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 rabbit anti-CPI17 alpha antigen affinity purified polyclonal antibody (Catalog # A05752-1) 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-rabbit 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 # EK1002) with Tanon 5200 system. A specific band was detected for CPI17 alpha at approximately 20KD. The expected band size for CPI17 alpha is at 20KD.

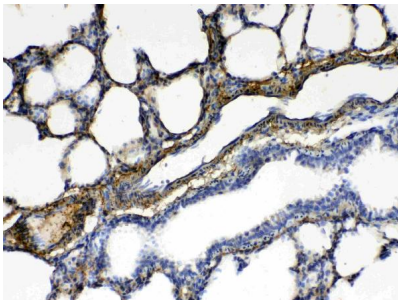
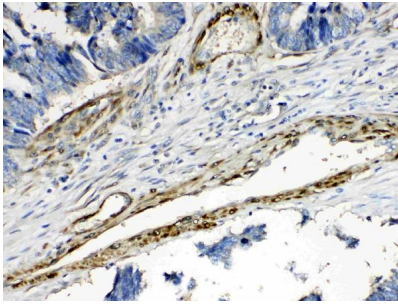


Figure 3. IHC analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

CPI17 alpha was detected in paraffin-embedded section of rat lung tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).



CPI17 alpha was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

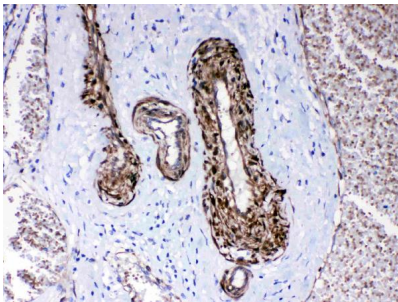


Figure 5. IHC analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

CPI17 alpha was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

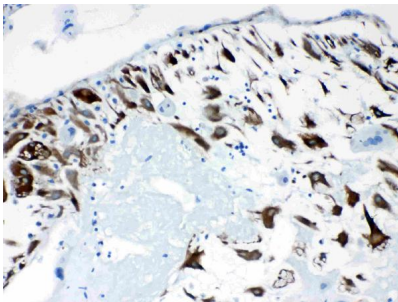


Figure 6. IHC analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

CPI17 alpha was detected in paraffin-embedded section of human placenta tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

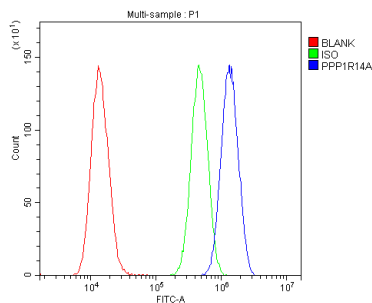
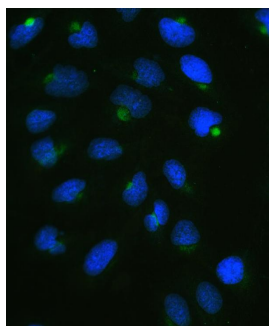


Figure 7. Flow Cytometry analysis of U20S cells using anti-CPI17 alpha antibody (A05752-1).

Overlay histogram showing U20S cells stained with A05752-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CPI17 alpha Antibody (A05752-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Figure 8. IF analysis of CPI17 alpha using anti-CPI17 alpha antibody (A05752-1).

CPI17 alpha was detected in immunocytochemical section of



U2OS 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 rabbit anti-CPI17 alpha Antibody (A05752-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.

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