10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-CPI17 alpha Picoband Antibody

Catalog # ABO10323

Product Information

Application	WB, IHC-P
Primary Accession	Q96A00
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Protein phosphatase 1 regulatory subunit 14A(PPP1R14A) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	94274
Other Names	Protein phosphatase 1 regulatory subunit 14A, 17 kDa PKC-potentiated inhibitory protein of PP1, Protein kinase C-potentiated inhibitor protein of 17 kDa, CPI-17, PPP1R14A, CPI17, PPP1INL
Calculated MW	16693
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm .
Tissue Specificity	Isoform 1 is detected in aorta and testis. Isoform 2 is detected in aorta. .
Source	Eukaryota
Protein Name	Protein phosphatase 1 regulatory subunit 14A
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	PPP1R14A
Synonyms	CPI17, PPP1INL
Function	Inhibitor of PPP1CA. Has over 1000-fold higher inhibitory activity when phosphorylated, creating a molecular switch for regulating the phosphorylation status of PPP1CA substrates and smooth muscle contraction.
Cellular Location	Cytoplasm.
Tissue Location	Isoform 1 is detected in aorta and testis. Isoform 2 is detected in aorta.

Background

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.

Images

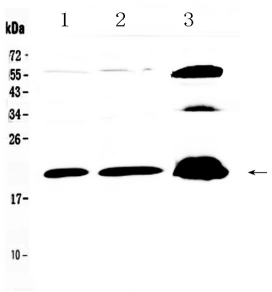
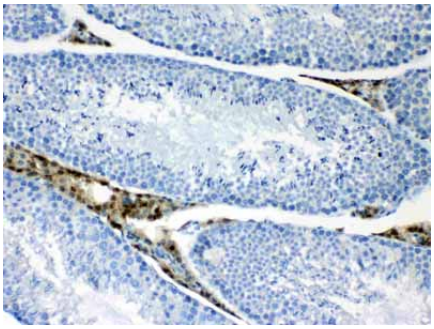


Figure 1. Western blot analysis of CPI17 alpha using anti-CPI17 alpha antibody (ABO10323). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat 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 # ABO10323) at 0.5 □¼g/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 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 2. IHC analysis of CPI17 alpha using anti- CPI17 alpha antibody (ABO10323).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 1 □¼g/ml rabbit anti- CPI17 alpha Antibody (ABO10323) 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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

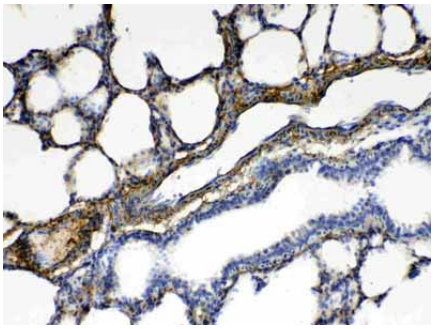


Figure 3. IHC analysis of CPI17 alpha using anti- CPI17 alpha antibody (ABO10323).CPI17 alpha was detected in paraffin-embedded section of rat lung tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti- CPI17 alpha Antibody (ABO10323) 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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

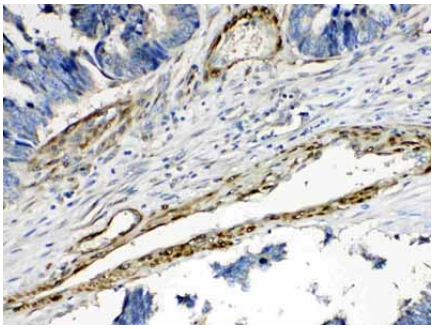


Figure 4. IHC analysis of CPI17 alpha using anti- CPI17 alpha antibody (ABO10323).CPI17 alpha was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti- CPI17 alpha Antibody (ABO10323) 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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

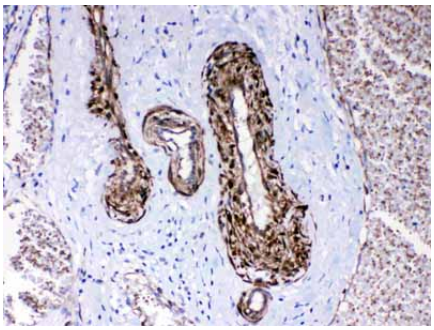
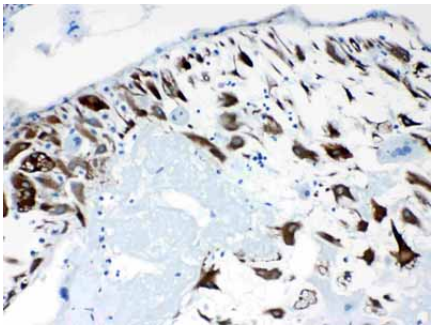


Figure 5. IHC analysis of CPI17 alpha using anti- CPI17 alpha antibody (ABO10323).CPI17 alpha was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti- CPI17 alpha Antibody (ABO10323) 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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Figure 6. IHC analysis of CPI17 alpha using anti- CPI17 alpha antibody (ABO10323).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 1 □¼g/ml rabbit



anti- CPI17 alpha Antibody (ABO10323) 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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.