

**Anti-Cyclophilin A Picoband Antibody**  
**Catalog # ABO10176****Specification**

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**Anti-Cyclophilin A Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P62937</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Peptidyl-prolyl cis-trans isomerase A(PPIA) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Cyclophilin A Picoband Antibody - Additional Information**

**Gene ID** 5478

**Other Names**

Peptidyl-prolyl cis-trans isomerase A, PPIase A, 5.2.1.8, Cyclophilin A, Cyclosporin A-binding protein, Rotamase A, Peptidyl-prolyl cis-trans isomerase A, N-terminally processed, PPIA, CYPA

**Calculated MW**

18012 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

**Subcellular Localization**

Cytoplasm . Secreted . Secretion occurs in response to oxidative stress in vascular smooth muscle through a vesicular secretory pathway that involves actin remodeling and myosin II activation, and mediates ERK1/2 activation.

**Protein Name**

Peptidyl-prolyl cis-trans isomerase A

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**Immunogen**

E.coli-derived human Cyclophilin A recombinant protein (Position: T116-E165). Human Cyclophilin A shares 98% and 95.9% amino acid (aa) sequence identity with mouse and rat Cyclophilin A, 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.**

**Anti-Cyclophilin A Picoband Antibody - Protein Information****Name** PPIA**Synonyms** CYPA**Function**

Catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides (PubMed:<a href="http://www.uniprot.org/citations/2001362" target="\_blank">2001362</a>, PubMed:<a href="http://www.uniprot.org/citations/20676357" target="\_blank">20676357</a>, PubMed:<a href="http://www.uniprot.org/citations/21245143" target="\_blank">21245143</a>, PubMed:<a href="http://www.uniprot.org/citations/21593166" target="\_blank">21593166</a>, PubMed:<a href="http://www.uniprot.org/citations/25678563" target="\_blank">25678563</a>). Exerts a strong chemotactic effect on leukocytes partly through activation of one of its membrane receptors BSG/CD147, initiating a signaling cascade that culminates in MAPK/ERK activation (PubMed:<a href="http://www.uniprot.org/citations/11943775" target="\_blank">11943775</a>, PubMed:<a href="http://www.uniprot.org/citations/21245143" target="\_blank">21245143</a>). Activates endothelial cells (ECs) in a pro-inflammatory manner by stimulating activation of NF-kappa-B and ERK, JNK and p38 MAP-kinases and by inducing expression of adhesion molecules including SELE and VCAM1 (PubMed:<a href="http://www.uniprot.org/citations/15130913" target="\_blank">15130913</a>). Induces apoptosis in ECs by promoting the FOXO1-dependent expression of CCL2 and BCL2L1 which are involved in EC chemotaxis and apoptosis (PubMed:<a href="http://www.uniprot.org/citations/31063815" target="\_blank">31063815</a>). In response to oxidative stress, initiates proapoptotic and antiapoptotic signaling in ECs via activation of NF-kappa-B and AKT1 and up-regulation of antiapoptotic protein BCL2 (PubMed:<a href="http://www.uniprot.org/citations/23180369" target="\_blank">23180369</a>). Negatively regulates MAP3K5/ASK1 kinase activity, autophosphorylation and oxidative stress-induced apoptosis mediated by MAP3K5/ASK1 (PubMed:<a href="http://www.uniprot.org/citations/26095851" target="\_blank">26095851</a>). Necessary for the assembly of TARDBP in heterogeneous nuclear ribonucleoprotein (hnRNP) complexes and regulates TARDBP binding to RNA UG repeats and TARDBP-dependent expression of HDAC6, ATG7 and VCP which are involved in clearance of protein aggregates (PubMed:<a href="http://www.uniprot.org/citations/25678563" target="\_blank">25678563</a>). Plays an important role in platelet activation and aggregation (By similarity). Regulates calcium mobilization and integrin ITGA2B:ITGB3 bidirectional signaling via increased ROS production as well as by facilitating the interaction between integrin and the cell cytoskeleton (By similarity). Binds heparan sulfate glycosaminoglycans (PubMed:<a href="http://www.uniprot.org/citations/11943775" target="\_blank">11943775</a>). Inhibits replication of influenza A virus (IAV) (PubMed:<a href="http://www.uniprot.org/citations/19207730" target="\_blank">19207730</a>). Inhibits ITCH/AIP4-mediated ubiquitination of matrix protein 1 (M1) of IAV by impairing the interaction of ITCH/AIP4 with M1, followed by the suppression of the nuclear export of M1, and finally reduction of the replication of IAV (PubMed:<a href="http://www.uniprot.org/citations/22347431" target="\_blank">22347431</a>, PubMed:<a href="http://www.uniprot.org/citations/30328013" target="\_blank">30328013</a>).

target="\_blank">30328013</a>).

### Cellular Location

Cytoplasm. Secreted. Nucleus Note=Secretion occurs in response to oxidative stress in vascular smooth muscle through a vesicular secretory pathway that includes Rho GTPase signaling, actin remodeling, and myosin II activation

### Anti-Cyclophilin A Picoband Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-Cyclophilin A Picoband Antibody - Images

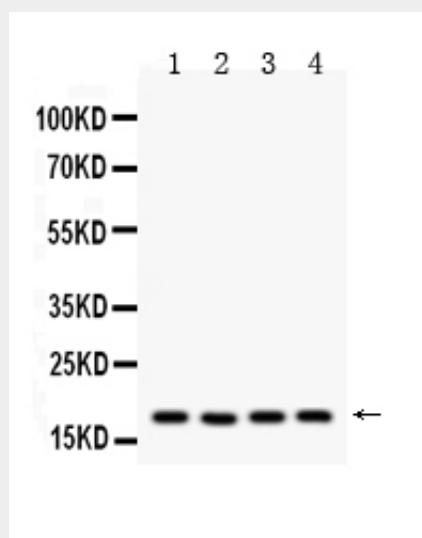


Figure 1. Western blot analysis of Cyclophilin A using anti- Cyclophilin A antibody (ABO10176). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat lung tissue lysates, Lane 2: rat brain tissue lysates, Lane 3: mouse lung tissue lysates, Lane 4: HELA 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- Cyclophilin A antigen affinity purified polyclonal antibody (Catalog # ABO10176) 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-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 Cyclophilin A at approximately 18KD. The expected band size for Cyclophilin A is at 18KD.

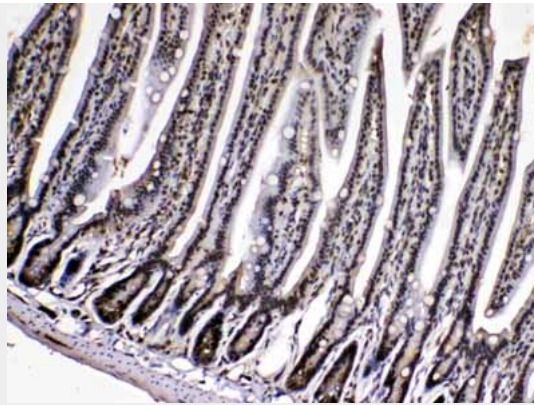


Figure 2. IHC analysis of Cyclophilin A using anti- Cyclophilin A antibody (ABO10176).Cyclophilin A was detected in paraffin-embedded section of mouse intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti- Cyclophilin A Antibody (ABO10176) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

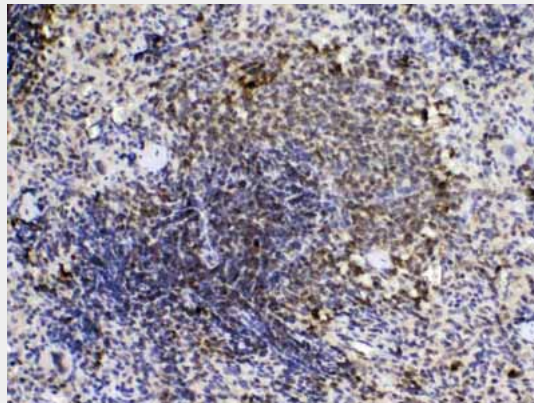


Figure 3. IHC analysis of Cyclophilin A using anti- Cyclophilin A antibody (ABO10176).Cyclophilin A was detected in paraffin-embedded section of rat spleen tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti- Cyclophilin A Antibody (ABO10176) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

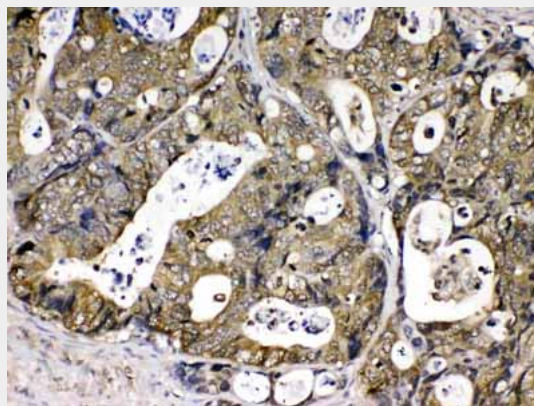


Figure 4. IHC analysis of Cyclophilin A using anti- Cyclophilin A antibody (ABO10176).Cyclophilin A

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 $\mu$ g/ml rabbit anti- Cyclophilin A Antibody (ABO10176) 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) with DAB as the chromogen.

#### **Anti-Cyclophilin A Picoband Antibody - Background**

Cyclophilin A (PPIA), Peptidylprolyl isomerase A, is an enzyme that in humans is encoded by the PPIA gene. Using chromosome 7 and chromosome 10 deletion hybrid panels, the PPIA coding gene is localized to 7p13-p11.2. This gene encodes a member of the peptidyl-prolyl cis-trans isomerase (PPIase) family. Cyclophilin A is also a member of the immunophilin class of proteins that all possess peptidyl-prolyl cis/trans isomerase activity and are believed to be involved in protein folding and/or intracellular protein transport. And Cyclophilin A binds to the Gag protein of human immunodeficiency virus type 1 (HIV-1). Additionally, Cyclophilin A may have an essential function in HIV-1 replication.