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Anti-Cyclophilin A Picoband Antibody

Catalog # ABO10176

Product Information

Application	WB, IHC-P
Primary Accession	P62937
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.

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
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 . 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.
Source	Eukaryota
Protein Name	Peptidyl-prolyl cis-trans isomerase A
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.

Protein Information

Name	PPIA
Synonyms	CYPA
Function	Catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides (PubMed:2001362, PubMed:20676357, PubMed:21245143, PubMed:21593166, PubMed:25678563). 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:11943775, PubMed:21245143). 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:15130913). Induces apoptosis in ECs by promoting the FOXO1-dependent expression of CCL2 and BCL2L11 which are involved in EC chemotaxis and apoptosis (PubMed:31063815). 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:23180369). Negatively regulates MAP3K5/ASK1 kinase activity, autophosphorylation and oxidative stress-induced apoptosis mediated by MAP3K5/ASK1 (PubMed:26095851). 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:25678563). 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:11943775). Inhibits replication of influenza A virus (IAV) (PubMed:19207730). 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:22347431, PubMed:30328013).
Cellular Location	Cytoplasm. Secreted Nucleus Cell membrane. 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.

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.may have an essential function in HIV-1 replication.

Images

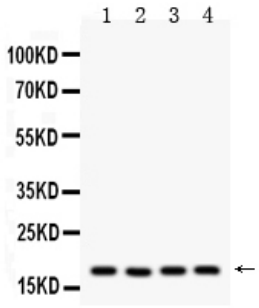


Figure 1. Western blot analysis of Cyclophilin A using anti-Cyclophilin A antibody (ABO10176). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: 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 □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 Cyclophilin A at approximately 18KD. The expected band size for Cyclophilin A is at 18KD.

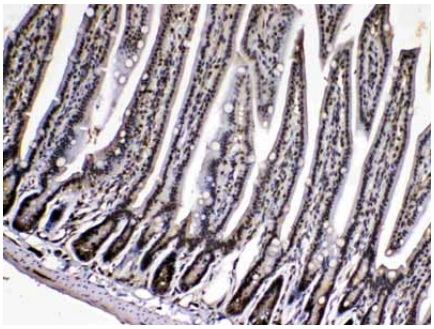


Figure 2. IHC analysis of Cyclophilin A using anti-Cyclophilin A antibody (ABO10176).Cyclophilin A was detected in paraffin-embedded section of mouse intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

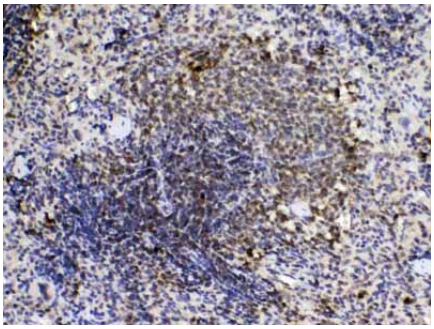
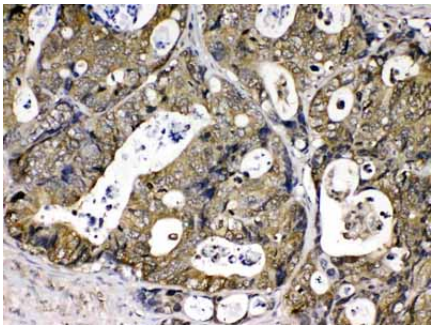


Figure 3. IHC analysis of Cyclophilin A using anti-Cyclophilin A antibody (ABO10176).Cyclophilin A was detected in paraffin-embedded section of rat spleen tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/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 Strepavidin-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 □¼g/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 Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.