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antibody and ELISA experts

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Anti-Angiotensin Converting Enzyme 1/ACE Antibody Picoband™

Catalog Number: PB9124

About ACE

Angiotensin-converting enzyme (ACE), an exopeptidase, is a circulating enzyme that participates in the body's renin-angiotensin system (RAS), which mediates extracellular volume (i.e. that of the blood plasma, lymph and interstitial fluid), and arterial vasoconstriction. It is secreted by pulmonary and renal endothelial cells and catalyzes the conversion of decapeptide angiotensin I to octapeptide angiotensin II. Using a DNA marker at the growth hormone gene locus, which they characterized as 'extremely polymorphic' and which showed no recombination with ACE, ACE was mapped to 17q22-q24, consistent with the in situ hybridization mapping to 17q23. ACE, or kininase II, is a dipeptidyl carboxypeptidase that plays an important role in blood pressure regulation and electrolyte balance by hydrolyzing angiotensin I into angiotensin II, a potent vasopressor, and aldosterone-stimulating peptide. The enzyme is also able to inactivate bradykinin, a potent vasodilator.

Overview

Product Name	Anti-Angiotensin Converting Enzyme 1/ACE Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Angiotensin Converting Enzyme 1/ACE Antibody Picoband™ catalog # PB9124. Tested in IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 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	P12821

Technical Details

Immunogen	E.coli-derived human ACE recombinant protein (Position: K651-Y864). Human ACE shares 73% and 76% amino acid (aa) sequences identity with mouse and rat ACE, respectively.
Predicted Reactive Species	Bovine, Canine, Chicken, Drosophila, Hamster, Horse, Monkey, Rabbit
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), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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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	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: Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, - Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Human, Mouse Immunocytochemistry/Immunofluorescence, 2ug/ml, Human

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Anti-Angiotensin Converting Enzyme 1/ACE Antibody Picoband™ (PB9124) Images

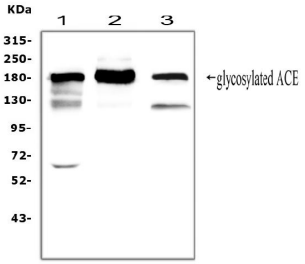

Figure 1. Western blot analysis of ACE using anti-ACE antibody (PB9124).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat lung tissue lysates,
Lane 2: mouse lung tissue lysates,
Lane 3: human Raji 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-ACE antigen affinity purified polyclonal antibody (Catalog # PB9124) 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 ACE at approximately 180KD. The expected band size for ACE is at 150KD.

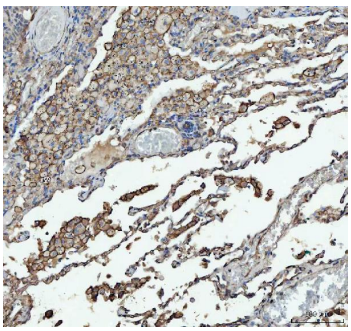

Figure 2. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) 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)(Catalog # SA1022) with DAB as the chromogen.

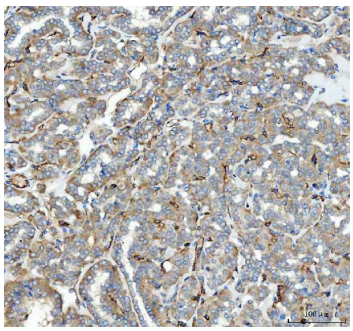

Figure 3. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) 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)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in paraffin-embedded section of mouse

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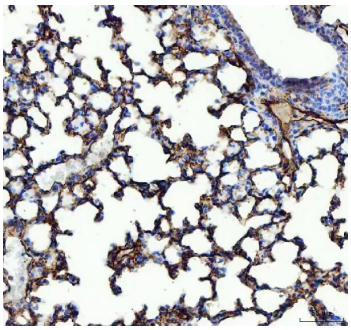

lung tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

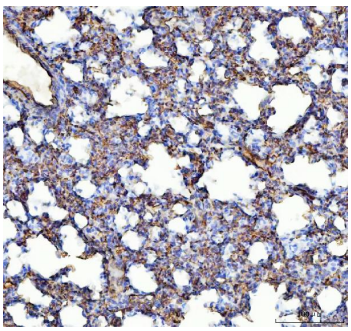

Figure 5. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) 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)(Catalog # SA1022) with DAB as the chromogen.

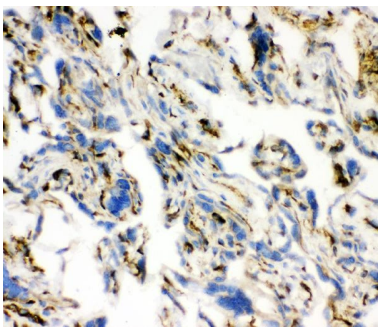

Figure 6. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in frozen section of human placenta tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

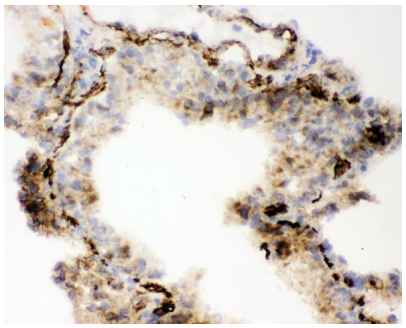

Figure 7. IHC analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in frozen section of mouse lung tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ACE Antibody (PB9124) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 8. IF analysis of ACE using anti-ACE antibody (PB9124).
ACE was detected in immunocytochemical section of A431 cell. 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-ACE Antibody (PB9124) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100

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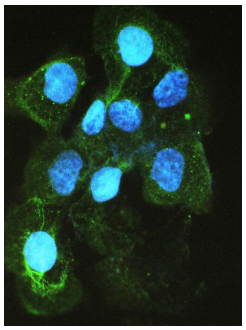

dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

4 Publications Citing This Product

1. PubMed ID: 10.3892/mmr.2017.6201, Low concentrations of bilirubin inhibit activation of hepatic stellate cells in vitro

2. PubMed ID: 10.1007/s00198-014-2992-y, Local renin-angiotensin system is associated with bone mineral density of glucocorticoid-induced osteoporosis patients

3. PubMed ID: 29969996, Telmisartan protects chronic intermittent hypoxic mice via modulating cardiac renin-angiotensin system activity

Visit bosterbio.com/anti-ace-picoband-trade-antibody-pb9124-boster.html to see all 4 publications.