

Anti-ROCK2 Antibody Picoband™

Catalog Number: PB9387

About ROCK2

Rho-associated kinase (ROCK), including the ROCK-I and ROCK-II isoforms, is a protein kinase involved in signaling from Rho to actin cytoskeleton. Serine/threonine kinase ROCK II/Rho kinase, which is an isozyme of ROCK I, is one of the targets for the small GTPase Rho. ROCK II regulates the formation of actin stress fibers and focal adhesions, cytokinesis, smooth muscle contraction, and the activation of c-fos serum response element. Sequencing analysis has shown that human ROCK II contains 1388 amino acid residues with a calculated molecular mass of approximately 161 kDa. Fluorescence in situ hybridization analysis showed that the human ROCK II gene is located on chromosome 2p24. Thumkeo et al. concluded that ROCK-II is essential in inhibiting blood coagulation and maintaining blood flow in the endothelium-free labyrinth layer and that loss of ROCK-II leads to thrombus formation, placental dysfunction, intrauterine growth retardation, and fetal death.

Overview

Product Name	Anti-ROCK2 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ROCK2 Antibody Picoband™ catalog # PB9387. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	O75116

Technical Details

Immunogen	E.coli-derived human ROCK2 recombinant protein (Position: E652-D923). Human ROCK2 shares 94.9% and 95.2% amino acid (aa) sequence identity with mouse and rat ROCK2, respectively.
Predicted Reactive Species	Hamster
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).
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: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Anti-ROCK2 Antibody Picoband™ (PB9387) Images

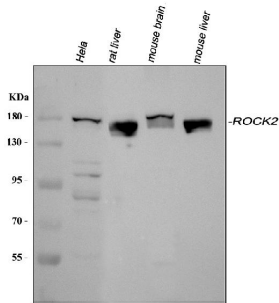


Figure 1. Western blot analysis of ROCK2 using anti-ROCK2 antibody (PB9387).

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 30 ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates,

Lane 2: rat liver tissue lysates,

Lane 3: mouse brain tissue lysates,

Lane 4: mouse liver tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-ROCK2 antigen affinity purified polyclonal antibody (Catalog # PB9387) 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 1:5000 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 ROCK2 at approximately 161 kDa. The expected band size for ROCK2 is at 161 kDa.

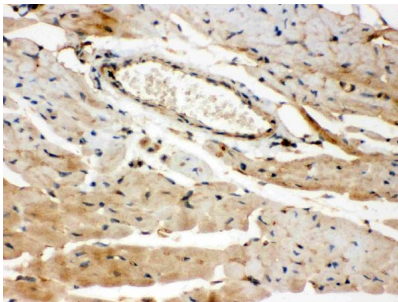


Figure 2. IHC analysis of ROCK2 using anti-ROCK2 antibody (PB9387).

ROCK2 was detected in a paraffin-embedded section of Mouse Cardiac Muscle tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-ROCK2 Antibody (PB9387) 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.

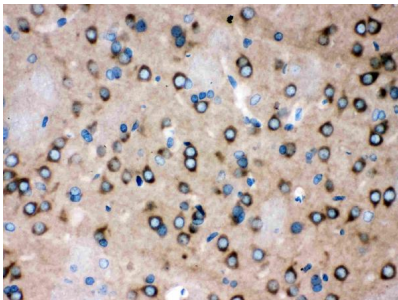
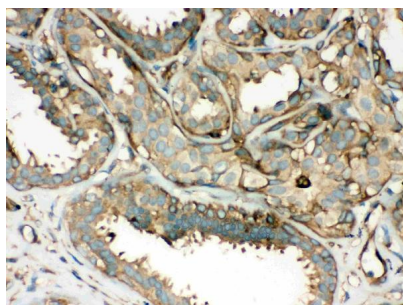


Figure 3. IHC analysis of ROCK2 using anti-ROCK2 antibody (PB9387).

ROCK2 was detected in a paraffin-embedded section of Rat Brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-ROCK2 Antibody (PB9387) 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 ROCK2 using anti-ROCK2 antibody (PB9387).



ROCK2 was detected in a paraffin-embedded section of Human Mammary Cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-ROCK2 Antibody (PB9387) 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.

5 Publications Citing This Product

1. PubMed ID: 32990282, Han F,Xu H,Shen JX,Pan C,Yu ZH,Chen JJ,Zhu XL,Cai YF,Lu YP.RhoA/Rock2/Limk1/cofilin1 pathway is involved in attenuation of neuronal dendritic spine loss by paeonol in the frontal cortex of D-galactose and aluminum³⁺induced Alzheimer's disease³⁺like ra
2. PubMed ID: 26604905, The role of Rho/Rho-kinase pathway and the neuroprotective effects of fasudil in chronic cerebral ischemia
3. PubMed ID: 20493836, 8,9-Epoxyeicosatrienoic acid analog protects pulmonary artery smooth muscle cells from apoptosis via ROCK pathway

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