

Anti-CARD4/NOD1 Antibody Picoband®

Catalog Number: PB9294

About NOD1

Nucleotide-binding oligomerization domain-containing protein 1, also known as CARD4, is a protein receptor that in humans is encoded by the NOD1 gene. NOD1 is a member of NOD-like receptor protein family and is a close relative of NOD2. NOD1 is mapped to 7p14.3. It recognizes bacterial molecules and stimulates an immune reaction. NOD1 protein contains a caspase recruitment domain (CARD). This gene is an intracellular pattern recognition receptor, which is similar in structure to resistant proteins of plants, and mediates innate and acquired immunity by recognizing bacterial molecules containing D-glutamyl-meso-diaminopimelic acid (iE-DAP) moiety. What more, it has been shown that NOD1 can sense cytosolic microbial products by monitoring the activation state of small Rho GTPases.

Overview

Product Name	Anti-CARD4/NOD1 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-CARD4/NOD1 Antibody Picoband® catalog # PB9294. Tested in IHC, ICC, WB applications. This antibody reacts with Human, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg NaN ₃ . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	Q9Y239

Technical Details

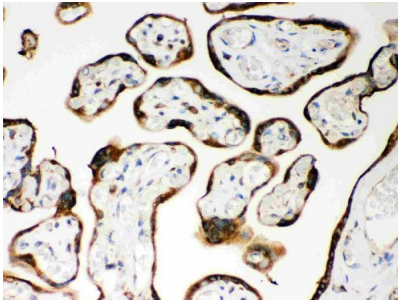
Immunogen	E.coli-derived human CARD4 recombinant protein (Position: M1-M160). Human CARD4 shares 82% amino acid (aa) sequence identity with mouse CARD4.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
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	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry, 0.5-1ug/ml Western blot, 0.1-0.5ug/ml

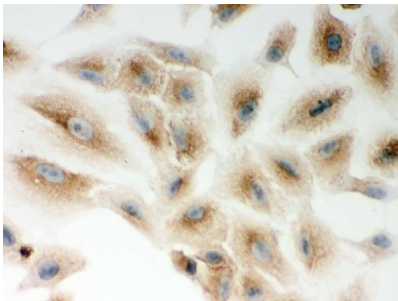
Anti-CARD4/NOD1 Antibody Picoband® (PB9294) Images



Western blot analysis of CARD4 using anti-CARD4 antibody (PB9294). 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: A549 Whole Cell Lysate, Lane 2: Rat Cardiac Muscle Tissue Lysate. 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-CARD4 antigen affinity purified polyclonal antibody (Catalog # PB9294) 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 CARD4 at approximately 107KD. The expected band size for CARD4 is at 107KD.

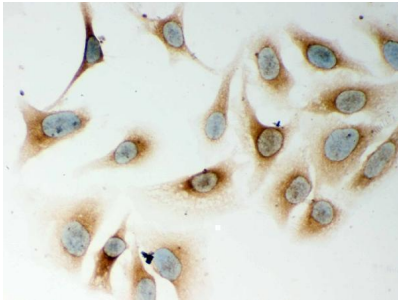


IHC analysis of CARD4 using anti-CARD4 antibody (PB9294). CARD4 was detected in paraffin-embedded section of Human Placenta Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CARD4 Antibody (PB9294) 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.

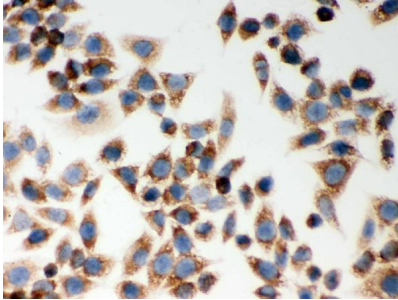


IHC analysis of CARD4 using anti-CARD4 antibody (PB9294). CARD4 was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-CARD4 Antibody (PB9294) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

IHC analysis of CARD4 using anti-CARD4 antibody (PB9294). CARD4 was detected in immunocytochemical section of Hela 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 1ug/ml rabbit anti-CARD4 Antibody (PB9294) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at



37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of CARD4 using anti-CARD4 antibody (PB9294). CARD4 was detected in immunocytochemical section of SMMC-7721 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 1ug/ml rabbit anti-CARD4 Antibody (PB9294) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

1 Publications Citing This Product

1. PubMed ID: 32888957, Ma X,Zhang W,Xu C,Zhang S,Zhao J,Pan Q,Wang Z.Nucleotide-binding oligomerization domain protein 1 enhances oxygen-glucose deprivation and reperfusion injury in cortical neurons via activation of endoplasmic reticulum stress-mediated autophagy. Exp Mol Pat

Visit bosterbio.com/anti-card4-picoband-trade-antibody-pb9294-boster.html to see all 1 publications.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-CARD4/NOD1 Antibody

For Research Use Only. Not for use in diagnostic procedures.