

Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband®

Catalog Number: PB9137

About CTNNA1

CTNNA1, also known as Catenin alpha-1 or Catenin (cadherin-associated protein), alpha 1, is a protein that in humans is encoded by the CTNNA1 gene. It is mapped to 5q31.2. When surface epithelium CTNNA1 was ablated, hair follicle development was blocked and epidermal morphogenesis was dramatically affected, with defects in adherens junction formation, intercellular adhesion, and epithelial polarity. In vitro, CTNNA1 null keratinocytes were poorly contact inhibited and grew rapidly. These differences were not dependent upon intercellular adhesion and were in marked contrast to keratinocytes conditionally null for another essential intercellular adhesion protein, desmoplakin Knockout keratinocytes exhibited sustained activation of the Ras-MAPK cascade due to aberrations in growth factor responses. It is concluded that features of precancerous lesions often attributed to defects in cell cycle regulatory genes can be generated by compromising the function of CTNNA1.

Overview

Product Name	Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband® catalog # PB9137. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, 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	Flow Cytometry, IF, IHC, IHC-F, 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	P35221

Technical Details

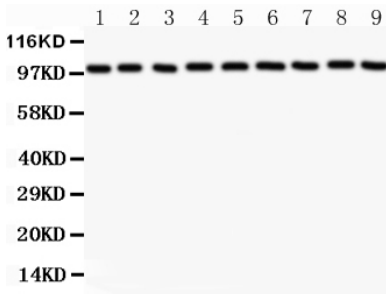
Immunogen	E.coli-derived human CTNNA1 recombinant protein (Position: D143-D292). Human CTNNA1 shares 98% amino acid (aa) sequence identity with mouse CTNNA1.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit 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
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human

Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband® (PB9137) Images

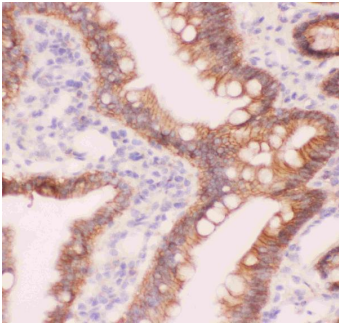


Western blot analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: Recombinant Human CTNNA1 Protein 0.5ng. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane 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-CTNNA1 antigen affinity purified polyclonal antibody (Catalog # PB9137) 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 CTNNA1 at approximately 47KD. The expected band size for CTNNA1 is at 47KD.

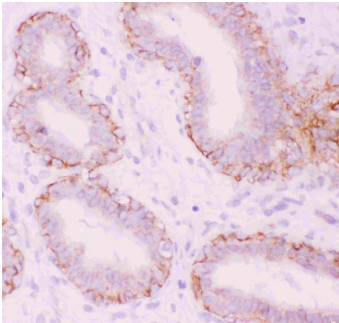


Western blot analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Liver Tissue Lysate Lane 2: Rat Lung Tissue Lysate Lane 3: Rat Cardiac Muscle Tissue Lysate Lane 4: NIH3T3 Whole Cell Lysate Lane 5: PC-12 Whole Cell Lysate Lane 6: HEPG2 Whole Cell Lysate Lane 7: HELA Whole Cell Lysate Lane 8: MCF-7 Whole Cell Lysate Lane 9: HEPA Whole Cell 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-CTNNA1 antigen affinity purified polyclonal antibody (Catalog # PB9137) 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 CTNNA1 at approximately 100KD. The expected band size for CTNNA1 is at 100KD.

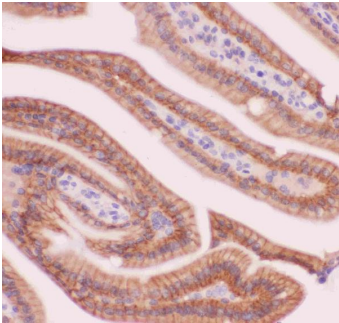
IHC analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). CTNNA1 was detected in paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CTNNA1 Antibody (PB9137) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30



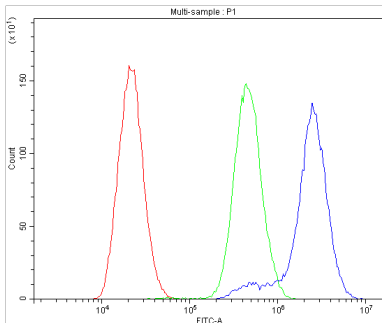
minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). CTNNA1 was detected in paraffin-embedded section of human mammary 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-CTNNA1 Antibody (PB9137) 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.

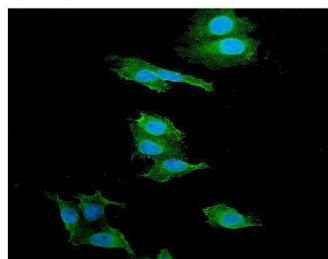


IHC analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). CTNNA1 was detected in paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CTNNA1 Antibody (PB9137) 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.



Flow Cytometry analysis of U-87 cells using anti-CTNNA1 antibody (PB9137). Overlay histogram showing U-87 cells stained with PB9137 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CTNNA1 Antibody (PB9137, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

IF analysis of CTNNA1 using anti-CTNNA1 antibody (PB9137). CTNNA1 was detected in immunocytochemical section of U2OS cells. 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-CTNNA1 Antibody (PB9137) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 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.

2 Publications Citing This Product

1. PubMed ID: 15484291, Prognostic and clinicopathological features of E-cadherin, β -catenin, γ -catenin and cyclin D1 expression in human esophageal squamous cell carcinoma

2. PubMed ID: 27065079, TALENs-directed knockout of the full-length transcription factor Nrf1 that represses malignant behaviour of human hepatocellular carcinoma (HepG2) cells

Visit bosterbio.com/anti-ctnna1-picoband-trade-antibody-pb9137-boster.html to see all 2 publications.

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Anti-alpha 1 Catenin/CTNNA1 Antibody

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