

Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband™ (monoclonal, 10I2)

Catalog Number: M01617-1

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™ (monoclonal, 10I2)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband™ (monoclonal, 10I2) catalog # M01617-1. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Monoclonal 10I2
Formulation	Each vial contains 4mg Trehalose, 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	Mouse
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.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human</p> <p>Flow Cytometry, 1-3ug/1x10⁶ cells, Human</p>

Anti-alpha 1 Catenin/CTNNA1 Antibody Picoband™ (monoclonal, 10I2) (M01617-1) Images

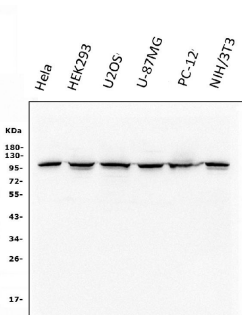


Figure 1. Western blot analysis of CTNNA1 using anti-CTNNA1 antibody (M01617-1).

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: human HeLa whole cell lysates;

Lane 2: human HEK293 whole cell lysates;

Lane 3: human U2OS whole cell lysates;

Lane 4: human U-87MG whole cell lysates;

Lane 5: rat PC-12 whole cell lysates;

Lane 6: mouse NIH/3T3 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 mouse anti-CTNNA1 antigen affinity purified monoclonal antibody (Catalog # M01617-1) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for CTNNA1 at approximately 100KD. The expected band size for CTNNA1 is at 100KD.

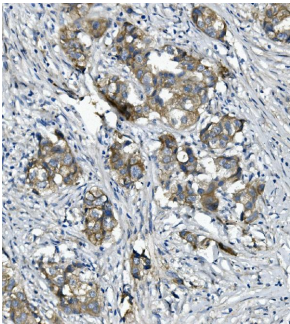


Figure 2. IHC analysis of CTNNA1 using anti-CTNNA1 antibody (M01617-1).

CTNNA1 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CTNNA1 Antibody (M01617-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

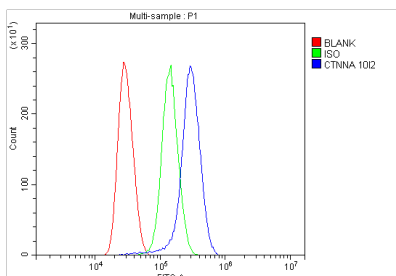


Figure 3. Flow Cytometry analysis of Jurkat cells using anti-CTNNA1 antibody (M01617-1). Overlay histogram showing Jurkat cells stained with M01617-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-CTNNA1 Antibody (M01617-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1 Publications Citing This Product

1. PubMed ID: 10.1038/srep23775, TALENs-directed knockout of the full-length transcription factor Nrf1alpha that represses malignant behaviour of human hepatocellular carcinoma (HepG2) cells

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