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Anti-beta Catenin/CTNNB1 Antibody Picoband®

Catalog Number: PA1212

About CTNNB1

Catenins are proteins found in complexes with cadherin cell adhesion molecules of animal cells. The first two catenins that were identified became known as alpha-catenin and beta-catenin. Alpha-catenin can bind to beta-catenin and can also bind actin. Beta-catenin binds the cytoplasmic domain of some cadherins. Beta-catenin is an adherens junction protein. It plays an important role in various aspects of liver biology including liver development (both embryonic and postnatal), liver regeneration following partial hepatectomy. HGF-induced hepatpomegaly, liver zonation, and pathogenesis of liver cancer.

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Overview

Product Name	Anti-beta Catenin/CTNNB1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-beta Catenin/CTNNB1 Antibody catalog # PA1212. Tested in IP, IHC, 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	IP, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P35222

Technical Details

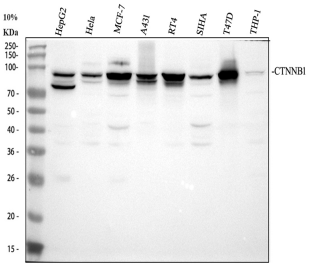
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human beta Catenin, identical to the related rat and mouse sequences.

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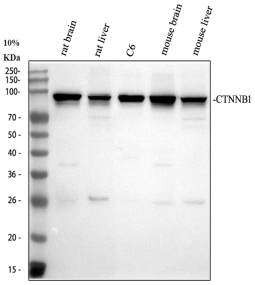
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human

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Anti-beta Catenin/CTNNB1 Antibody Picoband® (PA1212) Images



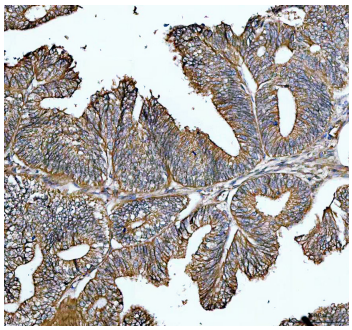
Western blot analysis of CTNNB1 using anti-CTNNB1 antibody (PA1212). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HepG2 whole cell lysates, Lane 2: human HeLa whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: human A431 whole cell lysates, Lane 5: human RT4 whole cell lysates, Lane 6: human SiHa whole cell lysates, Lane 7: human T47D whole cell lysates, Lane 8: human THP-1 whole cell 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-CTNNB1 antigen affinity purified polyclonal antibody (PA1212) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for CTNNB1 at approximately 95 kDa. The expected band size for CTNNB1 is at 85 kDa.



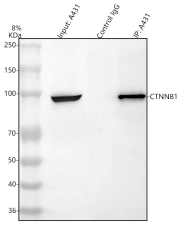
Western blot analysis of CTNNB1 using anti-CTNNB1 antibody (PA1212). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: rat liver tissue lysates, Lane 3: rat C6 whole cell lysates, Lane 4: mouse brain tissue lysates, Lane 5: 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-CTNNB1 antigen affinity purified polyclonal antibody (PA1212) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for CTNNB1 at approximately 95 kDa. The expected band size for CTNNB1 is at 85 kDa.

IHC analysis of CTNNB1 using anti-CTNNB1 antibody (PA1212). CTNNB1 was detected in a paraffin-embedded section of human endometrial carcinoma 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 2 ug/ml rabbit anti-CTNNB1 Antibody (PA1212) overnight at 4°C. Peroxidase Conjugated Goat

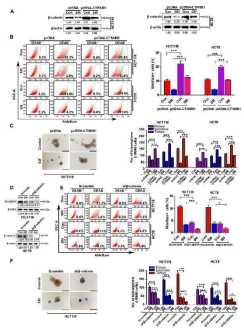
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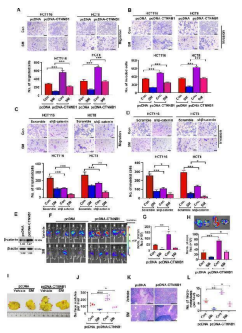
Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Immunoprecipitating CTNNB1 in A431 whole cell lysate. Western blot analysis of CTNNB1 using anti-CTNNB1 antibody (PA1212); Lane 1: A431 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-CTNNB1 antibody in A431 whole cell lysate; Lane 3: anti-CTNNB1 antibody (2ug) + A431 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-CTNNB1 antigen affinity purified polyclonal antibody (PA1212) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for CTNNB1 at approximately 95 kDa. The expected band size for CTNNB1 is at 85 kDa.



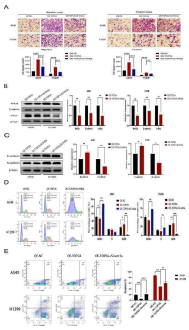
SM impedes traits of CSCs partially through suppressing beta-catenin in CRC. A Western blotting, B ALDH + staining and C tumorsphere formation assay were performed after CRC cells transduced with lentiviral beta-catenin (encoded by the CTNNB1 gene) cDNA-expressing construct in the presence or absence of SM. Scale bar: 100 um. D Western blotting, E ALDH + staining and F tumorsphere formation assays were conducted after CRC cells stably transduced with lentiviral shRNA against beta-catenin with or without SM treatment. Scale bar: 100 um. The values are represented as mean ± SD. * $p < 0.05$, *** $p < 0.001$ Index in PubMed under a CC BY license. PMID: 40646619



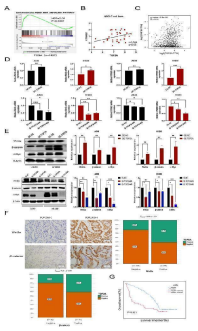
SM inhibits hepatic metastasis of CRC cells partially by attenuating beta-catenin. A Transwell migration and B matrigel invasion assays were conducted followed by CRC cells transduced with lentiviral beta-catenin-encoding construct with or without SM treatment. Scale bar: 100 um. C Transwell migration and D matrigel invasion assays were conducted followed by CRC cells transduced with lentiviral shRNA against beta-catenin in the presence or absence of SM. Scale bar: 100 um. E The overexpression efficiency of beta-catenin in MC38-Luc cells was examined by Western blotting analysis. F Representative images and G quantitative analysis of photon flux on day 21 of C57BL/6 mice followed by intrasplenic injection of MC38-Luc cells stably express beta-catenin. n = 5 per group. H Representative images and quantitative analysis of liver metastasis in C57BL/6 mice (n = 5) measured by

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bioluminescence imaging. I Representative images of metastatic livers and (J) the number of surface foci in the livers in C57BL/6 mice (n = 5) are shown. Arrows indicate the presence of metastatic nodules. K Representative photographs of H&E staining of the liver section and L the number of liver metastatic foci in microscopic fields are presented (n = 3). Scale bar: 200 um. The values are represented as mean ± SD. * $p < 0.05$, *** $p < 0.001$ Index in PubMed under a CC BY license. PMID: 40646619



TOP2A promotes non-small cell lung cancer progression via Wnt/beta-catenin signaling pathway. (A) After Wnt3a gene knockdown, the mobility and invading capabilities of TOP2A-overexpressing cells were evaluated using the transwell assay. (B,C) Expression of components of Wnt/beta-catenin signaling pathway and EMT-related proteins was examined using western blotting. (D) Flow cytometry was utilized to examine the cell cycle. (E) Analysis of apoptosis via flow cytometry. *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$ or ****$P < 0.0001$; ns: not signiffcant.Index in PubMed under a CC BY license. PMID: 38806610



TOP2A is involved in the progression and development of NSCLC via the Wnt/beta-catenin signaling cascade. (A) TCGA enrichment analysis revealed that TOP2A expression is enriched in the Wnt signaling pathway (n = 1037). (B) Several NSCLC cell lines exhibited a clear association between the transcription of TOP2A and beta-catenin. (C) The online GEPIA exhibited a correlation between TOP2A and WNT3A gene expression levels. (D,E) TOP2A overexpression and knockdown groups were examined for gene and protein levels of TOP2A, Wnt3a, and beta-catenin. (F) Immunohistochemical assessment of Wnt3a and beta-catenin expression in the TOP2A-positive and TOP2A-negative groups (200×). (G) Patients with high Wnt3a overexpression had an abysmal survival rate. *$P < 0.05$, **$P < 0.01$, or ***$P < 0.001$. All experiments were repeated three times independently.Index in PubMed under a CC BY license. PMID: 38806610

23 Publications Citing This Product

1. PubMed ID: 10.3892/ijo.2018.4564, Histone deacetylase HDAC4 promotes the proliferation and invasion of glioma cells

2. PubMed ID: 10.7150/jca.49138, LINC00184 involved in the regulatory network of ANGPT2 via ceRNA mediated miR-145 inhibition in gastric cancer

3. PubMed ID: 10.1002/elps.201700143, Novel chemiluminescent Western blot blocking and antibody incubation solution for enhanced antibody-antigen interaction and increased specificity

Visit bosterbio.com/anti-beta-catenin-antibody-pa1212-boster.html to see all 23 publications.

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