

Anti-Smad3 Antibody Picoband®

Catalog Number: PB9396

About SMAD3

Mothers against decapentaplegic homolog 3 also known as SMAD family member 3 or SMAD3 is a protein that in humans is encoded by the SMAD3 gene. SMAD3 is a member of the SMAD family of proteins. It is located in 15q22.33. And it mediates the signals from the transforming growth factor beta (TGF-beta) super family ligands that regulate cell proliferation, differentiation and death. Based on its essential role in TGF beta signaling pathway, SMAD3 has been related with tumor growth in cancer development.

Overview

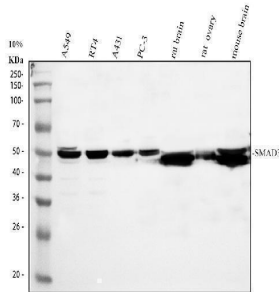
Product Name	Anti-Smad3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Smad3 Antibody Picoband® catalog # PB9396. Tested in ICC/IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees 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	IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	P84022

Technical Details

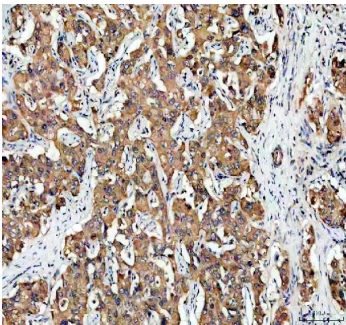
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Smad3, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) 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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunocytochemistry/Immunofluorescence, 5ug/ml, Human

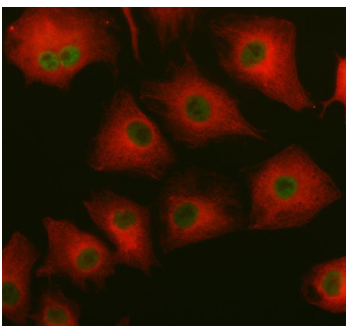
Anti-Smad3 Antibody Picoband® (PB9396) Images



Western blot analysis of Smad3 using anti-Smad3 antibody (PB9396). 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 A549 whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: human A431 whole cell lysates, Lane 4: human PC-3 whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat ovary tissue lysates, Lane 7: mouse brain 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-Smad3 antigen affinity purified polyclonal antibody (PB9396) 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 (Catalog # BA1054) 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 Smad3 at approximately 50-55 kDa. The expected band size for Smad3 is at 48 kDa.



IHC analysis of Smad3 using anti-Smad3 antibody (PB9396). Smad3 was detected in a paraffin-embedded section of human liver 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 2 ug/ml rabbit anti-Smad3 Antibody (PB9396) overnight at 4°C. Peroxidase Conjugated Goat 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.



IF analysis of Smad3 using anti-Smad3 antibody (PB9396) and anti-Tubulin Alpha antibody (M03989-3). Smad3 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 5 ug/mL rabbit anti-Smad3 Antibody (PB9396) and mouse anti-Tubulin Alpha antibody (M03989-3) overnight at 4°C. FITC Conjugated Goat Anti-Rabbit IgG (BA1105) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

1. PubMed ID: -, Huanyue Cui,Xueying Liu,Jin Zhang,Ke Zhang,Dahong Yao,Shi Dong,Shushu Feng,Lu Yang, Yuyao Li,Hangyu Wang,Jian Huang,Jinhui Wang,"Rhodiola rosea L. Attenuates Cigarette Smoke and Lipopolysaccharide-Induced COPD in Rats via Inflammation Inhibition and Antioxidant and Antifibrosis Pathways",Evidence-Based Complementary and Alternative Medicine,vol. 2021,Article ID 6103158,18 pages,2021.<https://doi.org/10.1155/2021/6103158>

2. PubMed ID: 32826874, Hong L,Li F,Tang C,Li L,Sun L,Li X,Zhu L.Semaphorin 7A promotes endothelial to mesenchymal transition through ATF3 mediated TGF-beta2/Smad signaling.Cell Death Dis.2020 Aug 10;11(8):695.doi:10.1038/s41419-020-02818-x.PMID:32826874;PMCID:PMC7442651.

3. PubMed ID: 25820389, Xu T, Ni Mm, Huang C, Meng Xm, He Yh, Zhang L, Li J. Inflammation. 2015 Oct;38(5):1794-804. Doi: 10.1007/S10753-015-0157-6. Nlrc5 Mediates Il-6 And Il-1?? Secretion In Lx-2 Cells And Modulated By The Nf-??b/Smad3 Pathway.

Visit bosterbio.com/anti-smad3-picoband-trade-antibody-pb9396-boster.html to see all 6 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-Smad3 Antibody

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