BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Smad2 Antibody Picoband®

Catalog Number: PA1898

About SMAD2

Smad2 (Mothers against decapentaplegic homolog 2), also known as MADR2, MADH2, SMAD family member 2 or SMAD2, is a protein that in humans is encoded by the SMAD2 gene. MAD homolog 2 belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. Eppert et al. (1996) mapped the MADR2 gene close to DPC4 at 18q21, a region which is frequently deleted in colorectal cancers. Riggins et al. (1996) mapped the human MADH2 gene to 18q21. Nakao et al. (1997) refined the localization of the SMAD2 gene to 18q21.1, approximately 3 Mb proximal to DPC4, by fluorescence in situ hybridization. SMAD2 mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors.

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Overview

Product Name	Anti-Smad2 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Smad2 Antibody catalog # PA1898. Tested in IHC, ICC, WB applications. This antibody reacts with Human. 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, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *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	Q15796

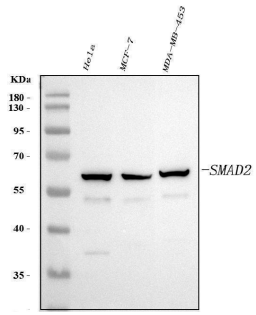
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Technical Details

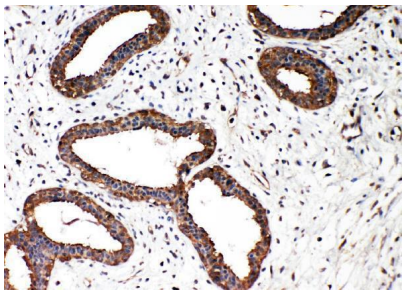
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Smad2, identical to the related rat and mouse sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG 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	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunocytochemistry , 0.5-1ug/ml, Human

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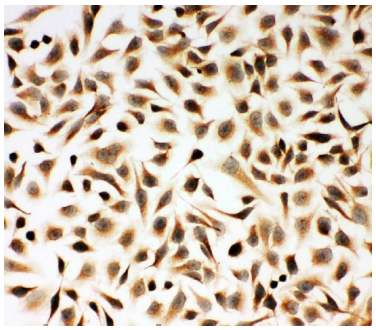
Anti-Smad2 Antibody Picoband® (PA1898) Images



Western blot analysis of SMAD2 using anti-SMAD2 antibody (PA1898). 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 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human MDA-MB-453 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-SMAD2 antigen affinity purified polyclonal antibody (Catalog # PA1898) 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SMAD2 at approximately 60 kDa. The expected band size for SMAD2 is at 60 kDa.



IHC analysis of SMAD2 using anti-SMAD2 antibody (PA1898). SMAD2 was detected in a paraffin-embedded section of human mammary 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 1 ug/ml rabbit anti-SMAD2 Antibody (PA1898) 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.



ICC analysis of SMAD2 using anti-SMAD2 antibody (PA1898). SMAD2 was detected in an immunocytochemical section of Hela 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 4 ug/ml rabbit anti-SMAD2 Antibody (PA1898) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

4 Publications Citing This Product

1. PubMed ID: 21693312, Tao Y, Hu L, Li S, Liu Q, Wu X, Li D, Fu P, Wei D, Luo Z. Transplant Proc. 2011 Jun;43(5):1985-8. Doi: 10.1016/J.Transproceed.2011.01.160. Tranilast Prevents The Progression Of Chronic Cyclosporine Nephrotoxicity Through Regulation Of Transforming...

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2. PubMed ID: 27019660, Effect of Kuijie Granule on the Expression of TGF-?/Smads Signaling Pathway in Patients with Ulcerative Colitis

3. PubMed ID: 26261569, Astragaloside effect on TGF-%u03B21, SMAD2/3, and %u03B1-SMA expression in the kidney tissues of diabetic KKAy mice

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Anti-Smad2 Antibody

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