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antibody and ELISA experts

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Anti-BMP5 Antibody Picoband™

Catalog Number: PB9689

About BMP5

Bone morphogenetic protein 5 is a protein that in humans is encoded by the BMP5 gene. This gene encodes a member of the bone morphogenetic protein family which is part of the transforming growth factor-beta superfamily. The superfamily includes large families of growth and differentiation factors. Bone morphogenetic proteins were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. These proteins are synthesized as prepropeptides, cleaved, and then processed into dimeric proteins. And this protein may act as an important signaling molecule within the trabecular meshwork and optic nerve head, and may play a potential role in glaucoma pathogenesis. This gene is differentially regulated during the formation of various tumors.

Overview

Product Name	Anti-BMP5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-BMP5 Antibody Picoband™ catalog # PB9689. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P22003

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human BMP-5, different from the related mouse sequence by three amino acids.
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).
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.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA , 0.1-0.5ug/ml, Human

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Anti-BMP5 Antibody Picoband™ (PB9689) Images

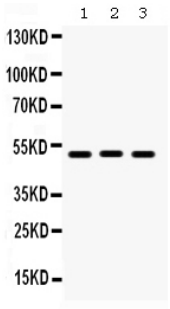

Figure 1. Western blot analysis of BMP-5 using anti-BMP-5 antibody (PB9689).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
Lane 1: Rat Liver Tissue Lysate at 50ug,
Lane 2: Mouse Liver Tissue Lysate at 50ug,
Lane 3: A549 Whole Cell Lysate at 40ug.
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-BMP-5 antigen affinity purified polyclonal antibody (Catalog # PB9689) 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 BMP-5 at approximately 51 kDa. The expected band size for BMP-5 is at 51 kDa.

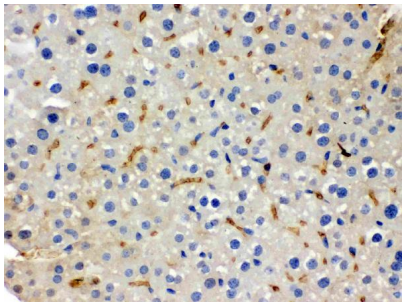

Figure 2. IHC analysis of BMP-5 using anti-BMP-5 antibody (PB9689).
BMP-5 was detected in a paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-BMP-5 Antibody (PB9689) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

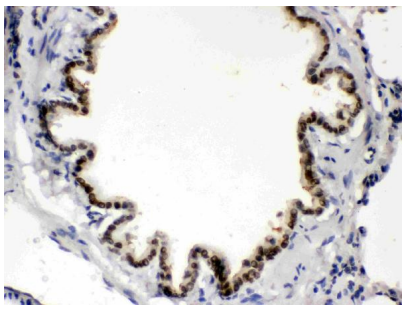

Figure 3. IHC analysis of BMP-5 using anti-BMP-5 antibody (PB9689).
BMP-5 was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-BMP-5 Antibody (PB9689) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of BMP-5 using anti-BMP-5 antibody (PB9689).
BMP-5 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval

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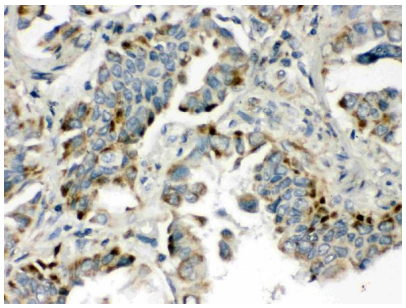

solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-BMP-5 Antibody (PB9689) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

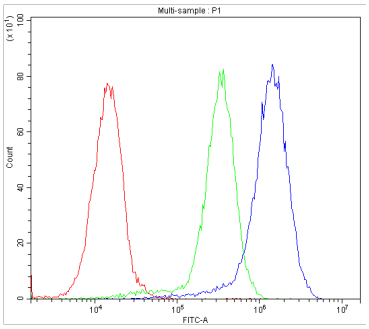

Figure 5. Flow Cytometry analysis of U20S cells using anti-BMP5 antibody (PB9689).
Overlay histogram showing U20S cells stained with PB9689 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-BMP5 Antibody (PB9689,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1 Publications Citing This Product

1. PubMed ID: 25709905, Wang Q, Xue Ml, Zhao Gq, Liu Mg, Ma Yn, Ma Y. Int J Ophthalmol. 2015 Feb 18;8(1):39-45. Doi: 10.3980/J.Issn.2222-3959.2015.01.07. Ecollection 2015. Form-Deprivation Myopia Induces Decreased Expression Of Bone Morphogenetic Protein-2, 5 In Guinea P...

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