

## Anti-Bone Sialoprotein/IBSP Antibody Picoband®

Catalog Number: PA1505

### About IBSP

BSP is also known as IBSP (integrin-binding sialoprotein). The protein encoded by this gene is a major structural protein of the bone matrix. Bone sialoprotein is an acidic glycoprotein of approximately 70 kD that undergoes extensive posttranslational modifications. It constitutes approximately 12% of the noncollagenous proteins in human bone and is synthesized by skeletal-associated cell types, including hypertrophic chondrocytes, osteoblasts, osteocytes, and osteoclasts. The only extraskelatal site of its synthesis is the trophoblast. This protein binds to calcium and hydroxyapatite via its acidic amino acid clusters, and mediates cell attachment through an RGD sequence that recognizes the vitronectin receptor. The BSP gene is mapped to 4q22.1.

### Overview

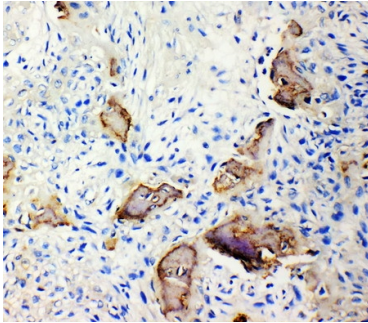
Product Name	Anti-Bone Sialoprotein/IBSP Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Bone Sialoprotein/IBSP Antibody catalog # PA1505. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg Thimerosal, 0.05mg NaN <sub>3</sub> . *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	P21815

### Technical Details

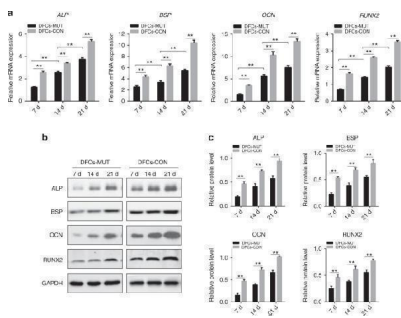
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Bone Sialoprotein, different from the related rat and mouse sequences by three amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, 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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Western blot, 0.1-0.5ug/ml, Human, Rat, Mouse

## Anti-Bone Sialoprotein/IBSP Antibody Picoband® (PA1505) Images



Anti-Bone Sialoprotein antibody, PA1505, IHC(P)IHC(P):  
Human Osteosarcoma Tissue



Analysis of the mRNA and protein expression of osteogenic differentiation markers during the osteogenic differentiation of DFCs. a Histograms showing the relative mRNA levels of ALP, BSP, OCN, and RUNX2 during the induction of differentiation. The mRNA levels were determined using RT-PCR with GAPDH as a reference for normalization. b Representative western blots showing the protein levels of ALP, BSP, OCN, and RUNX2. c Histograms showing the relative protein levels of ALP, BSP, OCN, and RUNX2 during the induction of differentiation. Values are means  $\pm$  SD of three independent experiments (\* P

## 3 Publications Citing This Product

1. PubMed ID: 30988819, Liu B,Xu M,Guo Z,Liu J,Chu X,Jiang H.Interleukin-8 promotes prostate cancer bone metastasis through upregulation of bone sialoprotein.Oncol Lett.2019 May;17(5):4607-4613.doi:10.3892/ol.2019.10138.Epub 2019 Mar 12.PMID:30988819;PMCID:PMC6447917.
2. PubMed ID: 24265840, The Osteogenic Potential of Mesoporous Bioglasses/Silk and Non-Mesoporous Bioglasses/Silk Scaffolds in Ovariectomized Rats: In vitro and In vivo Evaluation
3. PubMed ID: 27347083, Effect of kidney-reinforcing and marrow-beneficial Chinese medicine on bone metabolism-related factors following spinal cord injury in rats

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Anti-Bone Sialoprotein/IBSP Antibody

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