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Anti-IGFBP5 Antibody Picoband®

Catalog Number: PB9711

About IGFBP5

Insulin-like growth factor-binding protein 5 is a protein that in humans is encoded by the IGFBP5 gene. The expression of IGFBP5 by stable transfection and adenovirus-mediated infection is inhibitory to growth in 2 human breast cancer cell lines. IGFBP5 expression leads to G2/M cell cycle arrest and apoptosis. Stable expression of IGFBP5 in the breast cancer cell lines also inhibits the formation and growth of tumors following injection in athymic mice. It is concluded that IGFBP5 is a growth inhibitor and proapoptotic agent in breast cancer cells. Additionally, IGFBP-5 is expressed by fibroblasts, myoblasts and osteoblasts, making it the predominant IGFBP found in bone extracts. It has a strong affinity for hydroxyapatite, allowing it to bind to bone cells. When bound to extracellular matrix, IGFBP-5 is protected from proteolysis and potentiates IGF activity, but when it is soluble, IGFBP-5 is cleaved to a biologically inactive 21 kDa fragment (1, 2).

Overview

Product Name	Anti-IGFBP5 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-IGFBP5 Antibody Picoband® catalog # PB9711. Tested in ELISA, 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	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg 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	P24593

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human IGFBP5, different from the related mouse and rat sequences by two amino acids.

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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
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	ELISA, 0.1-0.5ug/ml, - Western blot, 0.1-0.5ug/ml, Human

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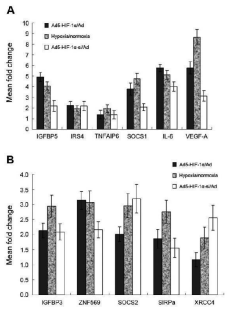
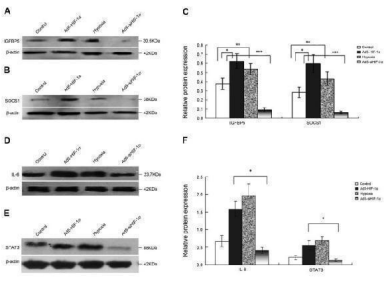
Anti-IGFBP5 Antibody Picoband® (PB9711) Images

Western blot analysis of IGFBP5 using anti-IGFBP5 antibody (PB9711). 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 40ug of sample under reducing conditions. Lane 1: U20S Whole Cell Lysate, Lane 2: HELA Whole Cell Lysate. 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-IGFBP5 antigen affinity purified polyclonal antibody (Catalog # PB9711) 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 IGFBP5 at approximately 23 kDa. The expected band size for IGFBP5 is at 31 kDa.



Real-time PCR analysis of upregulated or downregulated gene expression in response to HIF-1alpha (A) Aliquots of the same RNA preparations used for microarray hybridization were analyzed by quantitative real-time PCR . In three pairwise comparisons, the upregulation-folds of IGFBP5, IRS4, TNFAIP6, SOCS1, IL-6, VEGF-A mRNA expression were calculated. The mean and standard error are shown ($p < 0.05$). (B) Aliquots of the same RNA preparations used for microarray hybridization were analyzed by quantitative real-time PCR. In three pairwise comparisons, the downregulation-folds of IGFBP3, ZNF569, SOCS2, SIRPa and XRCC4 mRNA were calculated. The mean and standard error are shown ($p < 0.05$). Index in PubMed under a CC BY license. PMID: 20003295



Western blot analysis of regulation of protein expression by HIF-1alpha in NCI-H446 cells . According to different treatments, all the cells were divided into four groups: control group (the cells cultured under normoxic conditions of 20% O2), Ad5-HIF-1alpha transfection group, hypoxia group (the cells cultured under normoxic conditions of 1% O2) and Ad5-siHIF-1alpha transfection group (after transfection, the cells were cultured under normoxic conditions of 1% O2). (A) Western blot analysis for IGFBP5 protein expressed by the cells of four groups. (B) Western blot analysis for SOCS1 protein expressed by the cells of four groups. (C) Densitometric analysis of the IGFBP5 and SOCS1 bands compared to the corresponding beta-actin bands (*$p < 0.05$ expression of IGFBP5 or SOCS1 protein in Ad5-HIF-1alpha group vs. control group; ** $p < 0.05$ expression of IGFBP5 or SOCS1 protein in hypoxia group vs. control group; *** $p < 0.05$ expression of IGFBP5 or SOCS1 protein in Ad5-siHIF-1alpha group vs. control group). (D)

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Western blot analysis for IL-6 protein expressed by the cells of four groups. (E) Western blot analysis for STAT3 protein expressed by the cells of four groups. (F) Densitometric analysis of the IL-6 and STAT3 bands compared to the corresponding beta-actin bands (*p < 0.05 expression of IL-6 or STAT3 protein in Ad5-HIF-1alpha group vs. Ad5-siHIF-1alpha group group.) Index in PubMed under a CC BY license. PMID: 20003295

3 Publications Citing This Product

1. PubMed ID: 19476635, Expressions of IGFBP-5, cFLIP in cervical intraepithelial neoplasia, cervical carcinoma and their clinical significances: a molecular pathology

2. PubMed ID: 20003295, The effects of HIF-1alpha on gene expression profiles of NCI-H446 human small cell lung cancer cells

3. PubMed ID: 30482199 , Chi-miR-3031 regulates beta-casein via the PI3K/AKT-mTOR signaling pathway in goat mammary epithelial cells (GMECs)

Visit bosterbio.com/anti-igfbp5-picoband-trade-antibody-pb9711-boster.html to see all 3 publications.

Anti-IGFBP5 Antibody

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