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antibody and ELISA experts

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Anti-IGF1 Receptor/Igf1r Antibody Picoband®

Catalog Number: A00070

About Igf1r

IGF1R (Insulin-like Growth Factor 1 (IGF-1) Receptor) is a protein found on the surface of human cells. It is a transmembrane receptor that is activated by a hormone called Insulin-like growth factor 1 (IGF-1) and by a related hormone called IGF-2. It belongs to the large class of tyrosine kinase receptors. The IGF1R gene is mapped on 15q26.3. IGF-1 plays an important role in growth and continues to have anabolic effects in adults - meaning that it can induce hypertrophy of skeletal muscle and other target tissues. Using a yeast 2-hybrid system, it was identified a regulatory subunit of phosphatidylinositol (PI) 3-kinase, PIK3R3, as a binding partner of IGF1R. Functional interaction between BRCA1 and SP1 in the regulation of the IGF1R gene was studied in Schneider cells, a Drosophila cell line which lacks endogenous SP1. In these cells, BRCA1 suppressed 45% of the SP1-induced trans-activation of the IGF1R promoter. Overexpression of the Grb10-binding fragment of Gigyf1 resulted in a significant increase in Igf1-stimulated Igf1r tyrosine phosphorylation. Like the insulin receptor, the IGF-1 receptor is a receptor tyrosine kinase - meaning it signals by causing the addition of a phosphate molecule on particular tyrosines. IGF-1 activates the Insulin receptor at approximately 0.1x the potency of insulin. Part of this signaling may be via IGF1R-InsulinReceptor heterodimers.

Overview

Product Name	Anti-IGF1 Receptor/Igf1r Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-IGF1 Receptor/Igf1r Antibody Picoband® catalog # A00070. Tested in ELISA, IHC, WB applications. This antibody reacts with 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	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
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	Q60751

Technical Details

Immunogen	E. coli-derived mouse IGF1 Receptor recombinant protein (Position: E31-K257).
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).

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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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml ELISA, 0.1-0.5ug/ml

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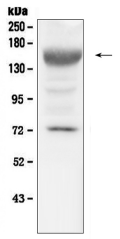
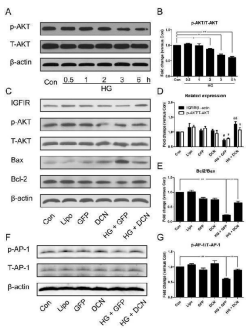
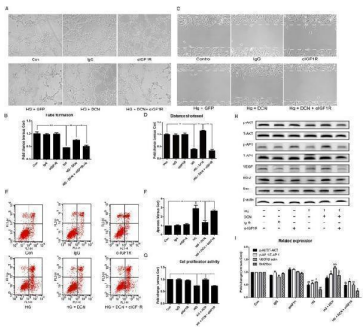
Anti-IGF1 Receptor/Igf1r Antibody Picoband® (A00070) Images



Western blot analysis of IGF1 Receptor using anti-IGF1 Receptor antibody (A00070). 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 50ug of sample under reducing conditions. Lane 1: mouse liver tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-IGF1 Receptor antigen affinity purified polyclonal antibody (Catalog # A00070) at 0.5 ug/mL overnight at 4 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 1:10000 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 IGF1 Receptor at approximately 155KD. The expected band size for IGF1 Receptor is at 155KD.



Overexpression of decorin activated the IGF1R-AKT-AP-1 pathway. (A , B) The phosphorylation of AKT was decreased by HG treatment in a time-dependent manner. (C – E) The expression of IGF1R, Bcl2, and Bax and the phosphorylation of AKT. (F , G) The phosphorylation of AP-1. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. # p<0.05, compared to Con. & p<0.05, && p<0.01, compared to HG + GFP. Index in PubMed under a CC BY license. PMID: 28290552



The IGF1R antibody (alphaIGF1R) blocked the effects induced by overexpression of decorin. (A , B) The tube formation test; the photographs were taken at a magnification of 100×. (C , D) The cell wound healing test; the photographs were taken at a magnification of 100×. (E , F) The apoptosis assay. (G) CCK8 assessment. (H , I) The expression of VEGF, Bcl2, and Bax and the phosphorylation of AKT and AP 1. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. # p<0.05, ## p<0.01, compared to Con. & p<0.05, && p<0.01, compared to HG + GFP. $ p<0.05, $$ p<0.01, compared to HG + DCN. Index in PubMed under a CC BY license. PMID: 28290552

IHC analysis of IGF1 Receptor using anti-IGF1 Receptor antibody (A00070).IGF1 Receptor was detected in paraffin-embedded section of mouse small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IGF1 Receptor Antibody (A00070) overnight at 4 Biotinylated goat

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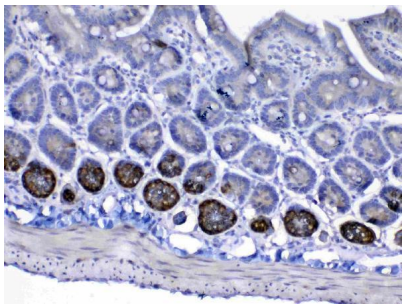
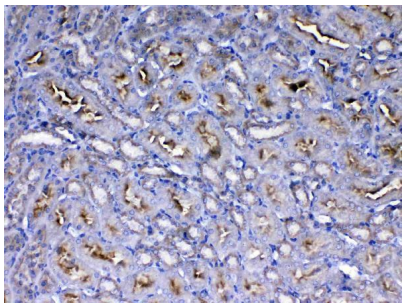


anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of IGF1 Receptor using anti-IGF1 Receptor antibody (A00070).IGF1 Receptor was detected in paraffin-embedded section of mouse kidney tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IGF1 Receptor Antibody (A00070) overnight at 4 Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

6 Publications Citing This Product

1. PubMed ID: 19424673, Treating Human Meniscal Fibrochondrocytes with hIGF-1 Gene by Liposome

2. PubMed ID: 22720981, Insulin-like growth factors in endometrioid adenocarcinoma: Correlation with clinico-pathological features and estrogen receptor expression

3. PubMed ID: 27725848, Let-7a inhibits migration of melanoma cells via down-regulation of HMGA2 expression

Visit bosterbio.com/anti-igf1-receptor-picoband-trade-antibody-a00070-boster.html to see all 6 publications.

Anti-IGF1 Receptor/Igf1r Antibody

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