

Anti-TGF beta Receptor II/TGFB2 Antibody Picoband®

Catalog Number: PA1866

About TGFB2

TGFB2 (transforming growth factor, beta receptor II (70/80kDa)), also known as TGF-beta receptor type-2, TGFR-2, TGF-beta type II receptor, Transforming growth factor-beta receptor type II (TGF-beta receptor type II, TbetaR-II), is a member of the Ser/Thr protein kinase family and the TGFB receptor subfamily. A TGFB2 cDNA encoding a deduced 565-amino acid protein with a calculated molecular mass of approximately 60 kD in length. The encoded protein is a transmembrane protein that has a protein kinase domain, forms a heterodimeric complex with another receptor protein, and binds TGF-beta. This receptor/ligand complex phosphorylates proteins, which then enter the nucleus and regulate the transcription of a subset of genes related to cell proliferation. Mutations in this gene have been associated with Marfan syndrome, Loeys-Deitz aortic aneurysm syndrome, Osler-Weber-Rendu syndrome, and the development of various types of tumors. Alternatively spliced transcript variants encoding different isoforms have been characterized. TGFB2 may be a target of the EWS-FLI1 fusion protein found in Ewing sarcoma and related peripheral primitive neuroectodermal tumors.

Overview

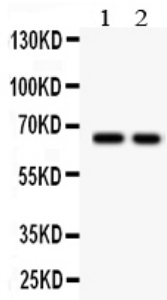
Product Name	Anti-TGF beta Receptor II/TGFB2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-TGF beta Receptor II/TGFB2 Antibody catalog # PA1866. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody 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	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	P37173

Technical Details

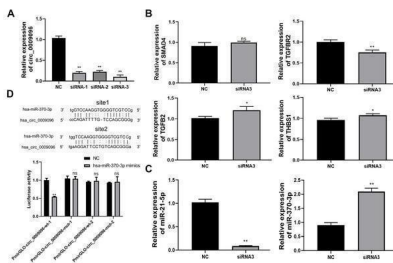
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human TGF beta Receptor II, identical to the related rat and mouse sequences.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit 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	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

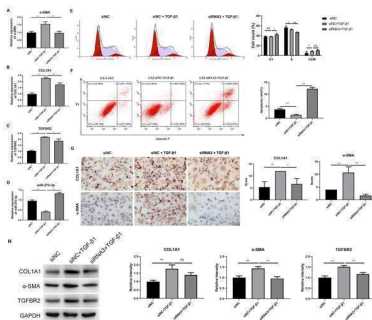
Anti-TGF beta Receptor II/TGFBR2 Antibody Picoband® (PA1866) Images



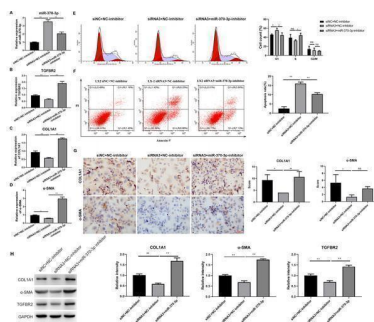
Anti-TGF beta Receptor II antibody, PA1866, Western blotting All lanes: Anti TGF beta Receptor II (PA1866) at 0.5ug/ml Lane 1: HEPG2 Whole Cell Lysate at 40ug Lane 2: COLO320 Whole Cell Lysate at 40ug Predicted bind size: 65KD Observed bind size: 65KD



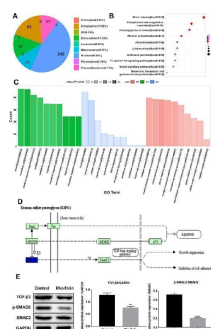
Hsa_circ_0009096 sponges miR-370-3p to modulate TGFBR2 expression in LX-2 cells. (A) LX-2 cells were transfected with hsa_circ_0009096 siRNAs for 24 h and then RT-qPCR was used to assess the interference effect of siRNAs (n = 3 biological replicates per group). (B) Relative mRNA expression of potential target genes of hsa_circ_0009096 (SMAD4, TGFBR2, TGFBR2, and THBS1) in LX-2 cells after transfection with hsa_circ_0009096 siRNA3 for 24 h were detected via RT-qPCR (n = 3 biological replicates per group). (C) The expression of miR-21-5p and miR-370-3p in LX-2 cells transfected with hsa_circ_0009096 siRNA3 for 24 h were analyzed by the RT-qPCR (n = 3 biological replicates per group). (D) The interaction between hsa_circ_0009096 and miR-370-3p in 293T cells was confirmed by the dual luciferase reporter assay (n = 3 biological replicates per group). NC: negative control; TGFBR2: TGF beta receptor 2; SMAD4: Mothers Against Deceptaplegic Homolog 4; TGFBR2: Transforming Growth Factor Beta 2; THBS1: Thrombospondin 1; NS, not significant (p > 0.05), * p < 0.05, ** p < 0.01. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 38766485



Hsa_circ_0009096 silencing suppressed TGF-beta1-induced HSC proliferation and fibrosis. LX-2 cells were transfected with siNC or hsa_circ_0009096 siRNA3 for 24 h, followed by treatment without or with 2 ng/mL rhTGF-beta1 for 24 h. (A-D) The miRNA/mRNA expression of a-SMA, COL1A1, TGFBR2, and miR-370-3p were detected by RT-qPCR (n = 3 biological replicates per group). (E-F) The cell cycle progression and the apoptosis of LX-2 cells were assessed by flow cytometry (n = 3 biological replicates per group). (G) Alterations of a-SMA and COL1A1 protein abundances in LX-2 cells were evaluated by Immunocytochemistry (n = 3 biological replicates per group). (H) The protein expression of TGFBR2, COL1A1, and a-SMA was examined by western blotting (n = 3 biological replicates per group). NC: negative control; TGFBR2: TGF beta receptor 2; COL1A1: collagen 1A1; alpha-SMA: alpha-smooth muscle actin; NS, not significant (p > 0.05), * p < 0.05, ** p < 0.01. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 38766485



MiR-370-3p mediated hsa_circ_0009096-regulated proliferation and fibrosis of TGF-beta1-treated HSCs. LX-2 cells were transfected with siNC+NC-inhibitor, hsa_circ_0009096 siRNA3+NC-inhibitor, and hsa_circ_0009096 siRNA3+miR-370-3p-inhibitor, respectively, for 24 h, followed by treatment with 2 ng/mL rhTGF-beta1 for 24 h. (A-D) The miRNA/mRNA expression of miR-370-3p, TGFBR2, COL1A1, and a-SMA were detected by RT-qPCR (n = 3 biological replicates per group). (E-F) The cell cycle progression and the apoptosis of LX-2 cells were assessed by flow cytometry (n = 3 biological replicates per group). (G) Alterations of a-SMA and COL1A1 protein abundances in LX-2 cells were evaluated by Immunocytochemistry (n = 3 biological replicates per group). (H) The protein expression of TGFBR2, COL1A1, and a-SMA was examined by western blotting (n = 3 biological replicates per group). NC: negative control; TGFBR2: TGF beta receptor 2; COL1A1: collagen 1A1; alpha-SMA: alpha-smooth muscle actin; NS, not significant (p > 0.05), * p < 0.05, ** p < 0.01. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 38766485



Bioinformatics analysis of DEPs. All 522 DEPs underwent the analysis of subcellular localization (A), the enrichment analysis of KEGG signaling pathways (B) and Gene Ontology annotation (C). (D) The DEPs in the "Proteoglycans in cancer" KEGG pathway. (E) Western blot analysis of TGF-beta2, SMAD2, and p-SMAD2 in PANC-1 cells treated with or without rhoifolin. GAPDH was used as internal reference. Index in PubMed under a CC BY license. PMID: 35383226

2 Publications Citing This Product

1. PubMed ID: 26839890, Mechanism Investigation of the Improvement of Chang Run Tong on the Colonic Remodeling in Streptozotocin-Induced Diabetic Rats
2. PubMed ID: 27019660, Effect of Kuijie Granule on the Expression of TGF- β /Smads Signaling Pathway in Patients with Ulcerative Colitis

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Anti-TGF beta Receptor II/TGFBR2 Antibody

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