

Anti-TGFBR1 Picoband Antibody
Catalog # ABO11719**Specification**

Anti-TGFBR1 Picoband Antibody - Product Information

Application	WB
Primary Accession	P36897
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for TGF-beta receptor type-1(TGFBR1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-TGFBR1 Picoband Antibody - Additional Information

Gene ID 7046

Other Names

TGF-beta receptor type-1, TGFR-1, 2.7.11.30, Activin A receptor type II-like protein kinase of 53kD, Activin receptor-like kinase 5, ALK-5, ALK5, Serine/threonine-protein kinase receptor R4, SKR4, TGF-beta type I receptor, Transforming growth factor-beta receptor type I, TGF-beta receptor type I, TbetaR-I, TGFBR1, ALK5, SKR4

Calculated MW

55960 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Cell membrane; Single-pass type I membrane protein. Cell junction, tight junction.

Tissue Specificity

Found in all tissues examined, most abundant in placenta and least abundant in brain and heart.

Protein Name

TGF-beta receptor type-1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human TGFBR1 (149-186aa HNRTVIHHRVPNEEDPSLDRPFISEGTTLKDLIYDMTT), identical to the related mouse and rat

sequences.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-TGFBR1 Picoband Antibody - Protein Information

Name TGFBR1

Synonyms ALK5, SKR4

Function

Transmembrane serine/threonine kinase forming with the TGF- beta type II serine/threonine kinase receptor, TGFBR2, the non- promiscuous receptor for the TGF-beta cytokines TGFBR1, TGFBR2 and TGFBR3. Transduces the TGFBR1, TGFBR2 and TGFBR3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis (PubMed:33914044). The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways. For instance, TGFBR1 induces TRAF6 autoubiquitination which in turn results in MAP3K7 ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD- independent signaling pathway through PARD6A phosphorylation and activation.

Cellular Location

Cell membrane; Single-pass type I membrane protein. Cell junction, tight junction. Cell surface. Membrane raft

Tissue Location

Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines (PubMed:25893292).

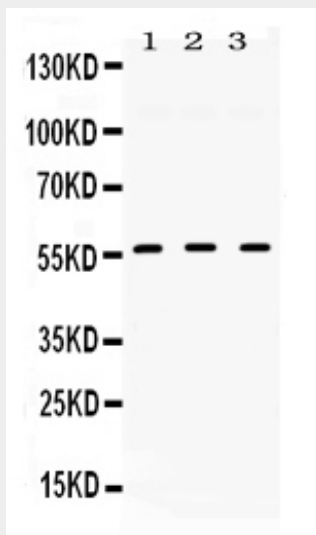
Anti-TGFBR1 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-TGFBR1 Picoband Antibody - Images



Western blot analysis of TGFBR1 expression in rat cardiac muscle extract (lane 1), mouse liver extract (lane 2) and HELA whole cell lysates (lane 3). TGFBR1 at 56KD was detected using rabbit anti- TGFBR1 Antigen Affinity purified polyclonal antibody (Catalog # ABO11719) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

Anti-TGFBR1 Picoband Antibody - Background

Transforming growth factor, beta receptor I is a TGF beta receptor. TGFBR1 is its human gene. The protein encoded by this gene forms a heteromeric complex with type II TGF-beta receptors when bound to TGF-beta, transducing the TGF-beta signal from the cell surface to the cytoplasm. Mutations in this gene have been associated with Loeys-Dietz aortic aneurysm syndrome (LDAS). TGFBR1 regulates cell cycle progression by a unique signaling mechanism that involves its binding to TGFBR2 and activation of TGFBR1. Both are transmembrane serine/threonine receptor kinases. The TGFBR1 receptor may be inactivated in many of the cases of human tumor cells refractory to TGF-beta-mediated cell cycle arrest.