

Anti-TGFBR1 Antibody
Catalog # ABO11040**Specification**

Anti-TGFBR1 Antibody - Product Information

Application	WB, IHC
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, IHC-P in Human;Rat;Mouse.

Reconstitution

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

Anti-TGFBR1 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

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat

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(TGFR-1)

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human TGFBR1

(281-295aa DYHEHGSLFDYLNRY), identical to the related rat and mouse 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.

Sequence Similarities

Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily.

Anti-TGFB1 Antibody - Protein Information

Name TGFB1

Synonyms ALK5, SKR4

Function

Transmembrane serine/threonine kinase forming with the TGF- beta type II serine/threonine kinase receptor, TGFB2, the non- promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 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. The formation of the receptor complex composed of 2 TGFB1 and 2 TGFB2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFB1 by the constitutively active TGFB2. Activated TGFB1 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, TGFB1 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

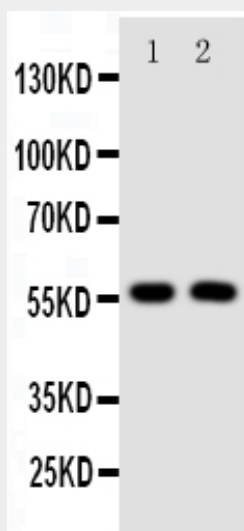
Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines (PubMed:25893292).

Anti-TGFB1 Antibody - Protocols

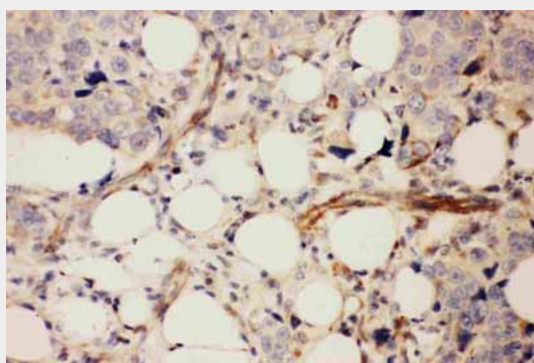
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-TGFB1 Antibody - Images



Anti-TGFB1 antibody, ABO11040, Western blottingAll lanes: Anti TGFB1 (ABO11040) at 0.5ug/mlLane 1: Human Placenta Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugPredicted bind size: 56KDObserved bind size: 56KD



Anti-TGFB1 antibody, ABO11040, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-TGFB1 Antibody - Background

TGFB1, Transforming growth factor, beta receptor I is a TGF beta receptor. TGFB1 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. The encoded protein is a serine/threonine protein kinase. Mutations in this gene have been associated with Loeys-Dietz aortic aneurysm syndrome(LDAS). TGFB1 regulates cell cycle progression by a unique signaling mechanism that involves its binding to TGFB2 and activation of TGFB1. Both are transmembrane serine/threonine receptor kinases. The TGFB1 receptor may be inactivated in many of the cases of human tumor cells refractory to TGFB-mediated cell cycle

arrest. Vellucci and Reiss(1997) reported that the TGFBR1 gene is approximately 31 kb long and contains 9 exons. The organization of the segment of the gene that encodes the C-terminal portion of the serine/threonine kinase domain appears to be highly conserved among members of the gene family.