

TGF-beta Receptor I Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11025**Specification**

TGF-beta Receptor I Antibody - Product Information

Application	WB
Primary Accession	P80204
Other Accession	EDL78209.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	56000

TGF-beta Receptor I Antibody - Additional Information**Gene ID** 29591**Application & Usage**

Western blotting (0.5-4 µg/ml) and Immunohistochemistry (5 µg/ml). However, the optimal conditions should be determined individually. antibody detects 30 and 55 kDa isoforms of TGF-β Receptor I on SDS-PAGE immunoblots in samples from human, mouse, rat, pig and bovine origins.

Other Names

Transforming growth factor beta receptor I, TGFR1, TGFR-1, TGFR 1, TGF beta receptor type 1, TbetaR I , Serine/threonine-protein kinase receptor R4, SKR4, SKR 4, SKR-4

Target/Specificity

TGF-b Receptor I

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

TGF-beta Receptor I Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TGF-beta Receptor I Antibody - Protein Information

Name Tgfr1

Function

Transmembrane serine/threonine kinase forming with the TGF- beta type II serine/threonine kinase receptor, TGFR2, 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 TGFR1 and 2 TGFR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFR1 by the constitutively active TGFR2. Activated TGFR1 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, TGFR1 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 (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P36897}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P36897} Cell junction, tight junction {ECO:0000250|UniProtKB:P36897}. Membrane raft {ECO:0000250|UniProtKB:P36897}. Cell surface {ECO:0000250|UniProtKB:P36897}

Tissue Location

Urogenital ridge, testis, ovary, brain and lungs.

TGF-beta Receptor I 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](#)

TGF-beta Receptor I Antibody - Images

TGF-beta Receptor I Antibody - Background

TGF- β (Transforming growth factor-beta superfamily members are critical regulators of cell proliferation, differentiation, morphogenesis, and pathogenesis. TGF-beta receptor is a serine/threonine kinase receptor complex that consists of two distinct transmembrane proteins known as type I and type II receptors. In response to ligand binding, the type II receptors form a stable complex with the type I receptors allowing phosphorylation and thus activation of the type I receptor kinases.