

TGF-beta Receptor I Blocking Peptide
Catalog # PBV10495b**Specification**

TGF-beta Receptor I Blocking Peptide - Product Information

Primary Accession	P80204
Other Accession	EDL78209.1
Gene ID	29591
Calculated MW	56000

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

The peptide is used for blocking the antibody activity of TGF- β Receptor I. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

TGF-beta receptor type-1, TGFR-1, 2.7.11.30, 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

Target/Specificity

TGF-beta Receptor I

Formulation

50 μ g (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

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

TGF-beta Receptor I Blocking Peptide - Protein Information**Name** Tgfbr1**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 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 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 (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 Blocking Peptide - 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 Blocking Peptide - Images