

Datasheet for ABIN1889447
TGFBR2 ELISA Kit[Go to Product page](#)

1 Image

Overview

Quantity:	96 tests
Target:	TGFBR2
Binding Specificity:	AA 24-159
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TGFBR2
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: I24-D159
Specificity:	Expression system for standard: NSO Immunogen sequence: I24-D159
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <10pg/mL

Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target: TGFR2

Alternative Name: TGFR2 ([TGFR2 Products](#))

Background: Protein Function: Transmembrane serine/threonine kinase forming with the TGF-beta type I serine/threonine kinase receptor, TGFR1, 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. .

Background: TGFR2(transforming growth factor, beta receptor II (70/80 kDa)), 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 TGFR2 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

Target Details

different informs have been characterized. TGFBR2 may be a target of the EWS-FLI1 fusion protein found in Ewing sarcoma and related peripheral primitive neuroectodermal tumors.
Synonyms: TGF-beta receptor type-2,TGFR-2,2.7.11.30,TGF-beta type II receptor,Transforming growth factor-beta receptor type II,TGF-beta receptor type II,TbetaR-II,TGFBR2,
Full Gene Name: TGF-beta receptor type-2
Cellular Localisation: Cell membrane, Single-pass type I membrane protein.

Gene ID: 7048

UniProt: [P37173](#)

Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

Comment: Sequence similarities: Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily.

Plate: Pre-coated

Protocol: human TGFBR2 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for TGFBR2 has been precoated onto 96-well plates. Standards(NSO, I24-D159) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TGFBR2 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human TGFBR2 amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human TGFBR2 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human TGFBR2 standard solution and each sample be measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 175, Standard deviation: 7.9, CV(%): 4.5
- Sample 2: n=16, Mean(pg/ml): 460, Standard deviation: 17.48, CV(%): 3.8
- Sample 3: n=16, Mean(pg/ml): 671, Standard deviation: 34.9, CV(%): 5.2,

Application Details

- Sample 1: n=24, Mean(pg/ml): 254, Standard deviation: 13.7, CV(%): 5.4
- Sample 2: n=24, Mean(pg/ml): 482, Standard deviation: 23.6, CV(%): 4.9
- Sample 3: n=24, Mean(pg/ml): 715, Standard deviation: 45, CV(%): 6.3

Restrictions: For Research Use only

Handling

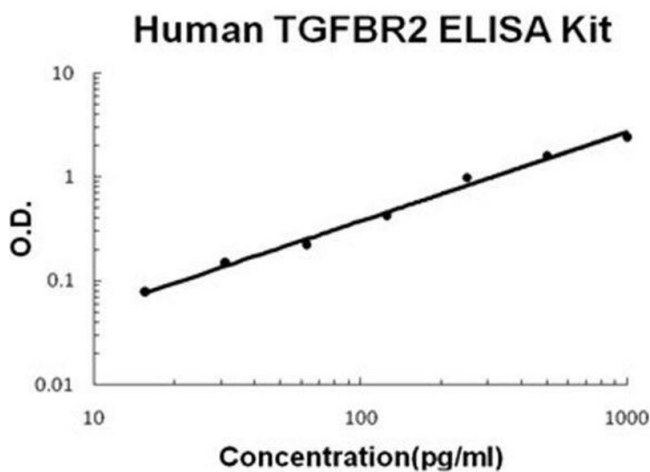
Handling Advice: Avoid multiple freeze-thaw cycles.

Storage: -20 °C, 4 °C

Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Expiry Date: 12 months

Images



ELISA

Image 1. Human TGFB β 2 PicoKine ELISA Kit standard curve