

Recombinant Human Transforming Growth Factor, Beta Receptor II (70/80kDa)

Cat. No. TGFBR2-1684H Lot. No. (See product label)

SPECIFICATION

Product Overview

Species Human

Source Mammalian Cells

Description

Transforming growth factor beta type II (TGFbeta RII) is a key inhibitor of epithelial cell growth and tumor suppressor gene. It also regulate cell differentiation and has critical regulatory roles in the process of tissue repair and remodeling. TGF beta RII plays an important role as a tumor suppressor in non-small cell lung cancer (NSCLC) carcinogenesis. TGF can be found in many different tissue types, including brain, heart, kidney, liver and testes. Over-expression of TGF can induce renal fibrosis, causing kidney disease, as well as diabetes, and ultimately end-stage renal disease (ESRD). Recent developments have found that, using certain types of protein antagonists against TGF β receptors, can halt and in some cases reverse the effects of renal fibrosis. Three TGF- β receptor types can be distinguished by their structural and functional properties. Receptor types I and II have similar ligand binding affinities and can only be distinguished from each other by peptide mapping, both receptor types I and II have a high affinity for TGF- β 1 and low affinity for TGF- β 2. TGF- β receptor type III has a high affinity for both TGF- β 1 and - β 2.

Molecular Weight The predicted molecular weight of Recombinant Human TGF- β sRII is Mr 82 kDa.

State Of Matter Lyophilized.

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Purity	>97% by SDS Page and analyzed by silver stain.
Endotoxin	<1.0 EU/g as determined by the LAL method.
Biological Activity	The biological activity of Human TGF- β sRII was determined by its ability to inhibit TGF- β 1 activity on a mouse T cell line, HT2. The expected ED50 for this effect is typically 10 - 40 ng/mL in the presence of 1 ng/mL of rhTGF- β 1.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles. See Product Insert for exact lot specific storage instructions.

GENE INFORMATION

Gene Name	TGFB2 transforming growth factor, beta receptor II (70/80kDa) [Homo sapiens]
Synonyms	TGFB2; transforming growth factor, beta receptor II (70/80kDa); AAT3; FAA3; MFS2; RIIC; LDS1B; LDS2B; TAAD2; TGFR-2; TGFbeta-RII; TGF-beta type II receptor; TGF-beta receptor type IIB; transforming growth factor beta receptor type IIC; EC 2.7.11.30
Gene ID	7048
mRNA Refseq	NM_001024847
Protein Refseq	NP_001020018
MIM	190182

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UniProt ID	P37173
Chromosome Location	3p22
Pathway	Adherens junction; Chronic myeloid leukemia; Colorectal cancer; Cytokine-cytokine receptor interaction; Endocytosis; MAPK signaling pathway; Pancreatic cancer; TGF-beta signaling pathway; Signaling by TGF beta
Function	ATP binding; SMAD binding; glycosaminoglycan binding; magnesium ion binding; manganese ion binding; protein heterodimerization activity; receptor activity; transferase activity; transforming growth factor beta binding; transforming growth factor beta receptor activity, type II; type I transforming growth factor beta receptor binding
PDB rendering based on 1ktz.	