## Recombinant Human TGFBR2 Protein (His & Fc Tag)(Active)

#### Catalog No. PKSH031653

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description		
Synonyms	AAT3;FAA3;LDS1B;LDS2;LDS2B;MFS2;RIIC;TAAD2;TGFbeta- RII;TGFR-2;TGF-beta receptor type-2; TGF-beta type II receptor;TGFBR2; Transforming growth factor-beta receptor type II	
Species	Human	
Expression Host	HEK293 Cells	
Sequence	Met 1-Asp 159	
Accession	NP_003233.4	
Calculated Molecular Weight	43.4 kDa	
Tag	C-His-Fc	
Bioactivity	Measured by its ability to inhibit TGF-beta1 activity on Mv-1-lu mink lung epithelial cells. The ED50 for this effect is typically 0.2-3.0 $\mu$ g/ml in the presence of 1 ng/mL of recombinant human TGF-beta1.	
Properties		
Purity	> 97 % as determined by reducing SDS-PAGE.	
Storage	Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.	
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.	
Formulation	Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5	
Reconstitution	Please refer to the printed manual for detailed information.	
Data		

KDa	MK	R
116		30320
66.2	-	-
45.0	-	
35.0	-	
25.0	-	
18.4 14.4	elabscie	ence.com

## Background

TGFBR2 is member of the Ser/Thr protein kinase family and the TGFB receptor subfamily. It is a transmembrane protein. TGFBR2 is comprised by a C-terminal protein kinase domain and an N-terminal ectodomain. The ectodomain consists of a compact fold containing nine beta-strands and a single helix stabilised by a network of six intra strand

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disulphide bonds. The folding topology includes a central five-stranded antiparallel beta-sheet, eight-residues long at its centre, covered by a second layer consisting of two segments of two-stranded antiparallel beta-sheets. TGFBR2 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 TGFBR2 gene have been associated with Marfan syndrome, Loeys-Deitz Aortic Aneurysm Syndrome, and the development of various types of tumors. TGFBR2 attenuates the biological activities of TGF-beta in colorectal cancer. TGFBR2 expression is increased in oral squamous cell carcinoma cells. Its expression is decreased by IL-1beta while inducing Sp3 via NFkappaB. TGFB2 and TGFBR2 are involved in the antiestrogenic activity.

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