Recombinant Human TGFBR1 Protein (T200-M503), Tag Free

Cat. No. TGFBR1-1293H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TGFBR1(T200-M503 end) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	T200-M503
Description	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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD-independent signaling pathway through PARD6A phosphorylation and activation.
Form	Liquid
Endotoxin	< 0.01 EU per μg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	TGFBR1 transforming growth factor, beta receptor 1 [Homo sapiens (human)]
Official Symbol	TGFBR1
Synonyms	TGFBR1; transforming growth factor, beta receptor 1; transforming growth factor, beta receptor I (activin A receptor type II like kinase, 53kD); TGF-beta receptor type-1; activin A receptor type II like kinase; 53kDa; ACVRLK4; ALK 5; tbetaR-I; TGF-beta receptor type I; TGF-beta type I receptor; activin receptor-like kinase 5; transforming growth factor beta receptor I; serine/threonine-protein kinase receptor R4; activin A

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	receptor type II-like kinase, 53kD; activin A receptor type II-like kinase, 53kDa; transforming growth factor-beta receptor type I; activin A receptor type II-like protein kinase of 53kD; transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kD); AAT5; ALK5; MSSE; SKR4; ALK-5; LDS1A; LDS2A; TGFR-1;
Gene ID	7046
mRNA Refseq	NM_001130916
Protein Refseq	NP_001124388
MIM	190181
UniProt ID	P36897

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