Recombinant Human TGFBR2, Fc Chimera

Cat. No. TGFBR2-151H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human transforming growth factor, beta receptor II was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified*human 293 cells*.
Species	Human
Source	HEK293
Description	Transforming growth factor-beta (TGF-beta; TGF-b) is a pleiotropic cytokine that controls the growth, survival, motility and differentiation of cells. It is involved in the degradation and remodelling of the extracellular matrix (ECM), and has an important role in development during embryogenesis. The biological effects of TGF-beta are mediated by binding to TGF-beta receptors; TGF-beta RI, TGF-beta RII (TGF-beta R2) , and TGF-beta RIII (TGF-beta R3). TGF-beta RII is synthesized as a 567 amino acid protein including a 22 amino acid signal sequence, a 144 amino acid extracellular domain, a 21 amino acid transmembrane domain and a 380 amino acid cytoplasmic domain containing a Ser/Thr protein kinase. TGF-beta RII contains 3 N-linked glycosylation sites.
Theoretical Sequence	TIPPHVQKSVNND MIVTDNNGAVKFPQL CKFCDVRFSTCDNQ KSCMS NCSITS IC EK P QEVCVAVWRKNDENI TLETVCHDPKLPY HDFILEDAASPKCIMK EKKK P GE T FFMCS CSS DECNDNIIFSEEYNTSNP DRIPKVDKKVEPKSCD KT HT C PP CP A PELLGG PSVFLFPP KPKDTLM ISRTPEVTCVVVDVS H ED PE VK FN WY VD G V EVHNAKTKPREEQY NSTYRVVSVLTVLH QDWLNGKEYKCRVS NK AL PA PIEKTI

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	SKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNG Q PENNY KTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKS LSLSPG K.
Molecular Mass	TGF-beta RII-Fc Chimera migrates as a broad band between 45 and 70 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified TGF-beta RII-Fc Chimera that has a predicted molecular mass of 42.7kDa.
PI	TGF-beta RII-Fc Chimera separates into a number of isoforms with a pI between 4.7 and 7.2 in 2D PAGE due to post-translational modifications, in particular glycosylation, the. This compares with the unmodified TGF-beta RII-Fc Chimera that has a predicted pI of 6.22.
% Carbohydrate	TGF-beta RII-Fc Chimera consists of 5-40% carbohydrate by weight.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.

GENE INFORMATION

Gene Name	TGFBR2 transforming growth factor, beta receptor II (70/80kDa) [Homo sapiens]

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Synonyms	transforming growth factor, beta receptor II (70/80kDa); AAT3; FAA3; MFS2; RIIC; LDS1B; LDS2B; TAAD2; TGFR-2; TGFbeta-RII; TGFBR2; transforming growth factor, beta receptor II; TGF-beta type II receptor; TGF-beta receptor type IIB; transforming growth factor beta receptor type IIC
Gene ID	7048
mRNA Refseq	NM_001024847
Protein Refseq	NP_001020018
MIM	190182
UniProt ID	P37173
Chromosome Location	3p22
Pathway	Adherens junction; Chronic myeloid leukemia; Colorectal cancer; Cytokine-cytokine receptor interaction; Endocytosis; MAPK signaling pathway; Pancreatic cancer; Pathways in cancer; TGF-beta signaling pathway; Signaling by TGF beta
Function	ATP binding; SMAD binding; glycosaminoglycan binding; magnesium ion binding; manganese ion binding; nucleotide 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

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