

Active Recombinant Mouse Tgfb1 Protein, Tag Free

Cat. No. Tgfb1-11152M Lot. No. (See product label)

SPECIFICATION

Product Overview	Mouse/Rat TGF-Beta 1 Protein, Tag Free is expressed from CHO cells. It contains AA Ala 279 - Ser 390 (Accession # P04202-1). This protein carries no "tag". Predicted N-terminus: Ala 279
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Species	Mouse
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Source	CHO
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ProteinLength	279-390 aa
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Description	Transforming Growth Factor beta 1 (TGF β 1/TGFB1 Protein) is a multifunctional cytokine synthesized by almost all cells. It demonstrates significant amino acid sequence stability across diverse species, underscoring its conserved function throughout evolution. TGF β 1/TGFB1 Protein is secreted as an inactive peptide, forming a 'latent complex' composed of a mature TGFB1 dimer non-covalently bound to its latency-associated peptide (LAP), which subsequently links to latent TGFB-binding proteins (LTBPs). The activated TGF β 1/TGFB1 Protein binds to ubiquitously expressed cell-surface transmembrane serine/threonine kinase receptors, specifically the type I (TGFBRI) and type II (TGFBRII) receptors, with a high binding ability to TGFbRII. This receptor engagement regulates various critical cellular processes including proliferation, growth, differentiation, and cell movement. Moreover, TGF β 1/TGFB1 Protein exerts immunomodulatory and profibrogenic effects, acting both locally and systemically, and plays a pivotal role in development, fibrosis, and cancer.
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Form	Lyophilized from 0.22 µm filtered solution in 50 mM HAC, pH3.0 with trehalose as protectant.
Bio-activity	Immobilized Mouse TGF-Beta 1 Protein, Tag Free at 0.2 µg/mL (100 µL/well) can bind Biotinylated Mouse TGF-beta RII, His, Avitag with a linear range of 0.1-3 ng/mL.
Molecular Mass	The protein has a calculated MW of 12.8 kDa. The protein migrates as 13-14 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).
Purity	>90% as determined by SDS-PAGE. >90% as determined by SEC-HPLC.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	Tgfb1 transforming growth factor, beta 1 [Mus musculus]
Official Symbol	Tgfb1
Synonyms	TGFB1; transforming growth factor, beta 1; transforming growth factor beta-1; TGF-beta 1; TGF-beta-1; regulatory protein; transforming growth factor-beta 1; Tgfb; Tgfb-1; TGFbeta1; TGF-beta1;

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Gene ID	21803
mRNA Refseq	NM_011577
Protein Refseq	NP_035707
UniProt ID	P04202

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