

TGF beta 1/TGFB1 Protein, Human (CHO)

Cat. No.:	HY-P7118
Synonyms:	TGF-beta-1; TGFB1; TGFB; rHuTGF-β1
Species:	Human
Source:	CHO
Accession:	P01137 (A279-S390)
Gene ID:	7040
Molecular Weight:	Approximately 12-14 kDa

PROPERTIES

AA Sequence	<p>A L D T N Y C F S S T E K N C C V R Q L Y I D F R K D L G W K W I H E P K G Y H</p> <p>A N F C L G P C P Y I W S L D T Q Y S K V L A L Y N Q H N P G A S A A P C C V P</p> <p>Q A L E P L P I V Y Y V G R K P K V E Q L S N M I V R S C K C S</p>
Biological Activity	<ol style="list-style-type: none"> The ED₅₀ is <0.2 ng/mL as measured in ability to inhibit the mouse IL-4-dependent proliferation of HT-2 cells. The ability to inhibit the IL-4-dependent proliferation of TF 1 human erythroleukemic cells has an ED₅₀ value of 4-40 pg/mL. Measured by its ability to inhibit cell proliferation of Mv-1-lu mink lung epithelial cells. The ED₅₀ for this effect is 0.09738 ng/mL, corresponding to a specific activity is 1.027×10⁷ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM NaAc, 50 mM NaCl, pH 5.0 or 50 mM Glycine-HCl, 150 mM NaCl, pH 2.5 or 4 mM HCL.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O or diluted with 50 mM Citrate. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TGF beta 1/TGFB1 Protein (transforming growth factor beta 1) is a multifunctional cytokine, which is synthesized by almost all cells. TGF beta 1/TGFB1 Protein has a high ability to bind with TGFβRII ^[3] .
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The sequence of amino acids in TGFβ1 proteins from different species is very stable, which leads to the conclusion that in the process of evolution, TGFβ has been only slightly altered, and that both in humans and in animals, its function is similar. TGFβ1/TGFB1 Protein is secreted as an inactive peptide, forming part of a 'latent complex' consisting of a mature TGFB1 dimer non-covalently bound to its latency-associated peptide (LAP) and, via LAP, to latent TGFβ-binding proteins (LTBPs). Activated TGFβ1/TGFB1 Protein binds to ubiquitously expressed cell-surface TGFβ1 type I receptors (TGFBRI) and type II receptors (TGFBRII), which are transmembrane serine/threonine kinases^[4].

TGFβ1/TGFB1 Protein regulates cell proliferation, growth, differentiation and cells movement. TGFβ1 has immunomodulatory effects. TGFβ1/TGFB1 Protein has profibrogenic effects. TGFβ1/TGFB1 Protein action can be local and systemic. TGFβ1/TGFB1 Protein plays a driving role in development, fibrosis and cancer^[4].

REFERENCES

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Caution: Product has not been fully validated for medical applications. For research use only.

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