

TGF beta 1/TGFB1 Protein, Human (HEK293)

Cat. No.:	HY-P70543
Synonyms:	Transforming Growth Factor Beta-1; TGF-Beta-1; Latency-Associated Peptide; LAP; TGFB1; TGFB; TGF-β1; TGF beta1; TGFbeta 1; TGF-beta 1; TGFbeta; TGF-beta-1
Species:	Human
Source:	HEK293
Accession:	P01137 (A279-S390)
Gene ID:	7040
Molecular Weight:	Approximately 13-15 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	<p>1. Immobilized Human Mature TGF beta 1, No Tag at 0.5 µg/mL (100 µl/well) on the plate. Dose response curve for Human TGF-beta RII, mFc Tag with the EC₅₀ of <8 ng/mL determined by ELISA.</p> <p>2. Measured by its ability to inhibit cell proliferation of Mv-1-lu mink lung epithelial cells. The ED₅₀ for this effect is <0.1 ng/mL, corresponding to a specific activity is >1×10⁷ units/mg.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of 50mM Glycine 150mM NaCl, pH 2.5 or 4mM HCL pH 2.5.
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 4mM HCL.
Storage & Stability	Stored at -20°C for 2 years from date of receipt. 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	<p>TGFβ is released from degranulating platelets and secreted by all of the major cell types participating in the repair process, including lymphocytes, macrophages, endothelial cells, smooth muscle cells, epithelial cells, and fibroblasts. Mammals express three isoforms of TGFβ designated TGFβ1, TGFβ2, and TGFβ3; TGFβ1 is the most abundant isoform in all tissues, and in human platelets it is the only isoform of the peptide. Certain cells such as retinal pigment epithelial cells secrete predominantly TGFβ2, and certain body fluids such as the aqueous and vitreous of the eye, amniotic fluid, saliva, and breast</p>
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milk contain principally TGFβ2. TGFβ3 is the least studied of the TGFβ isoforms. It has been isolated from human umbilical cord and is secreted from certain cells, including myoblast celllines; however, it is usually less abundant than either TGFβ1 or TGFβ2 in both tissue and cell extracts^[1]. There are three fundamental directions of its activities: I. TGFβ1 regulates cell proliferation, growth, differentiation and cells movement. II. TGFβ1 has immunomodulatory effects. III. TGFβ1 has profibrogenic effects. TGFβ1 action can be local and systemic^[2].

REFERENCES

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