

TGF beta 1 Protein, Human (112a.a, 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:	HEK 293
Accession:	P01137 (A279-S390)
Gene ID:	7040
Molecular Weight:	Approximately 13.0 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	The ability to inhibit the IL-4-dependent proliferation of TF 1 human erythroleukemic cells has an ED50 value of 4-40 pg/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Glycine-HCl, 150 mM NaCl, 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 ddH ₂ O.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. 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 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</p>
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proliferation, growth, differentiation and cells movement. II. TGF β 1 has immunomodulatory effects. III. TGF β 1 has profibrogenic effects. TGF β 1 action can be local and systemic^[2].

REFERENCES

- [1]. Robert A, et al. Transforming Growth Factor- β . The Molecular and Cellular Biology of Wound Repair. 1988, pp: 275-308.
- [2]. Kajdaniuk D, et al. Transforming growth factor β 1 (TGF β 1) in physiology and pathology. Endokrynol Pol. 2013;64(5):384-96.
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Caution: Product has not been fully validated for medical applications. For research use only.

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