

## TGF beta 1/TGFB1 LAP Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78168
Synonyms:	CEDLAP; DPD1; TGF beta1; TGFB; TGFB1; TGFBeta; TGF-beta-1; TGF β1; TGFβ; TGF-β-1
Species:	Human
Source:	HEK293
Accession:	P01137 (L30-R278, C33S)
Gene ID:	7040
Molecular Weight:	40-50 kDa

### PROPERTIES

<b>Biological Activity</b>	Immobilized Human ITGAV&ITGB6,His Tag at 1 µg/mL (100 µL/Well) on the plate. Dose response curve for Biotinylated Human LAP(TGF beta 1), His Tag with the EC <sub>50</sub> of ≤0.42 µg/mL determined by ELISA
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	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<sup>[3]</sup>.

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. TGF beta 1/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 TGF beta 1/TGFB1 Protein binds to ubiquitously expressed cell-surface TGFβ1 type I receptors (TGFβRI) and type II receptors (TGFβRII), which are transmembrane serine/threonine kinases<sup>[4]</sup>.

TGF beta 1/TGFB1 Protein regulates cell proliferation, growth, differentiation and cells movement. TGFβ1 has immunomodulatory effects. TGF beta 1/TGFB1 Protein has profibrogenic effects. TGF beta 1/TGFB1 Protein action can be local and systemic. TGF beta 1/TGFB1 Protein plays a driving role in development, fibrosis and cancer<sup>[4]</sup>.

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## REFERENCES

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

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