

**Synonym**

LAP (TGF-beta 1),LAP (TGFB1),TGFB1,CED,DPD1,LAP,TGF-beta-1,TGFB

**Source**

Biotinylated Human LAP (TGF-beta 1), His,Avitag (LAP-H82Q6) is expressed from human 293 cells (HEK293). It contains AA Leu 30 - Arg 278 (Accession # P01137-1 (C33S)).

Predicted N-terminus: His

**Molecular Characterization**



This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 32.2 kDa. The protein migrates as 45-55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Biotinylation**

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

**Biotin:Protein Ratio**

The biotin to protein ratio is *0.5-1* as determined by the HABA assay.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

**Storage**

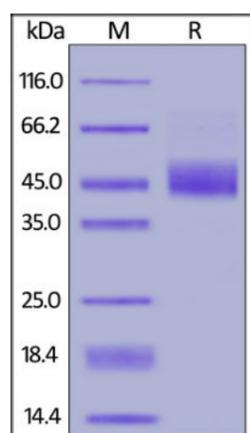
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

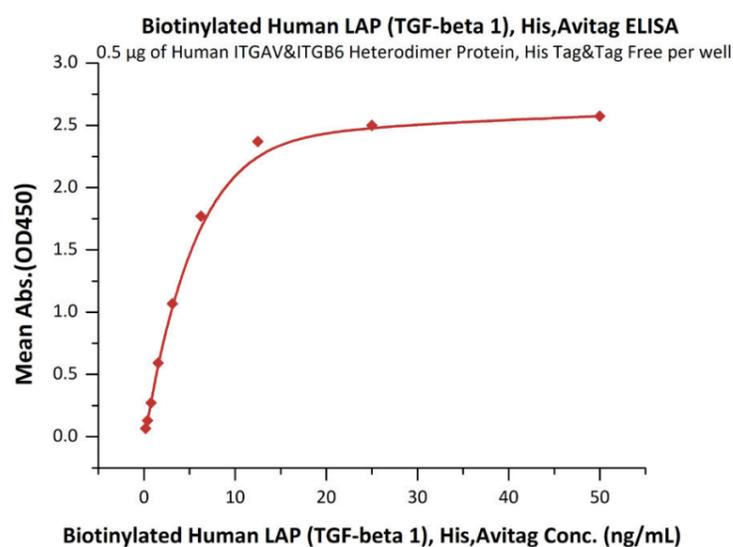
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

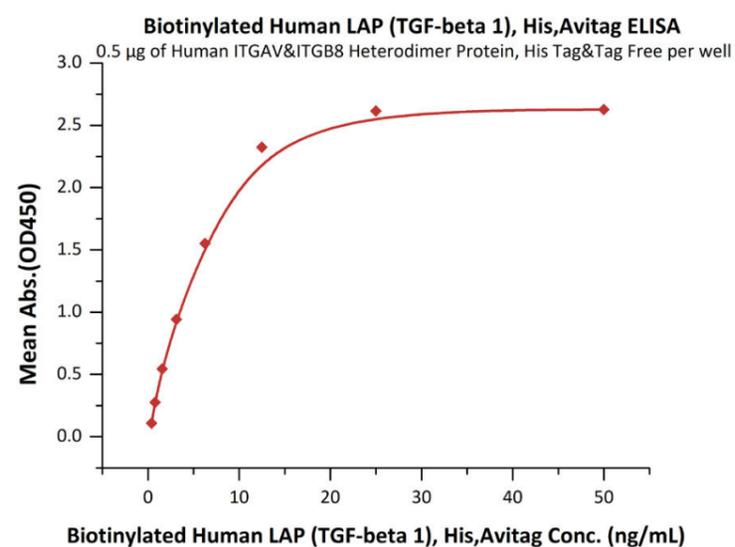


Biotinylated Human LAP (TGF-beta 1), His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

**Bioactivity-ELISA**



Immobilized Human ITGAV&ITGB6 Heterodimer Protein, His Tag&Tag Free (Cat. No. [IT6-H52E1](#)) at 5 µg/mL (100 µL/well) can bind Biotinylated Human LAP (TGF-beta 1), His,Avitag (Cat. No. [LAP-H82Q6](#)) with a linear range of 0.4-6 ng/mL (QC tested).



Immobilized Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. [IT8-H52W4](#)) at 5 µg/mL (100 µL/well) can bind Biotinylated Human LAP (TGF-beta 1), His,Avitag (Cat. No. [LAP-H82Q6](#)) with a linear range of 0.4-6 ng/mL (Routinely tested).

## Background

Transforming growth factor beta 1 (TGFB1) is also known as TGF-β1, CED, DPD1, TGFB. is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis. The TGFB1 protein helps control the growth and division (proliferation) of cells, the process by which cells mature to carry out specific functions (differentiation), cell movement (motility), and the self-destruction of cells (apoptosis). The TGFB1 protein is found throughout the body and plays a role in development before birth, the formation of blood vessels, the regulation of muscle tissue and body fat development, wound healing, and immune system function. TGFB1 is particularly abundant in tissues that make up the skeleton, where it helps regulate bone growth, and in the intricate lattice that forms in the spaces between cells (the extracellular matrix). Within cells, this protein is turned off (inactive) until it receives a chemical signal to become active. TGFB1 plays an important role in controlling the immune system, and shows different activities on different types of cell, or cells at different developmental stages. Most immune cells (or leukocytes) secrete TGFB1. TGFB1 has been shown to interact with TGF beta receptor 1, LTBP1, YWHAE, EIF3I and Decorin.

## References

- (1) [Ghadami M, et al., 2000, Am. J. Hum. Genet. 66 \(1\): 143-7.](#)
- (2) [Assoian R, et al., 1983, J Biol Chem, 258 \(11\): 7155-60.](#)
- (3) [Derynck R, et al., 1985, Nature 316 \(6030\): 701-5.](#)
- (4) [Letterio J, Roberts A, 1998, Annu Rev Immunol 16: 137-61.](#)

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.