Human Latent TGF-beta 1 / TGFB1 Protein, His Tag (MALS verified)

Catalog # TG1-H524x

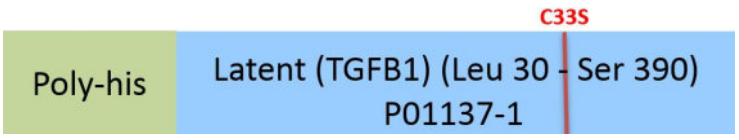
Synonym

Latent TGF-beta 1,Latent TGFB1,TGFB1,CED,DPD1,LAP,TGF-beta-1,TGFB

Source

Human Latent TGFB1, His Tag(TG1-H524x) is expressed from human 293 cells (HEK293). It contains AA Leu 30 - Ser 390 (Accession # P01137-1).
Predicted N-terminus: His

Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 42.6 kDa (monomer). The protein migrates as 38-43kDa and 50 kDa (LAP) and 13 kDa (TGFB1) under reducing (R) condition (SDS-PAGE) due to glycosylation and Interchain disulfide bond.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

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

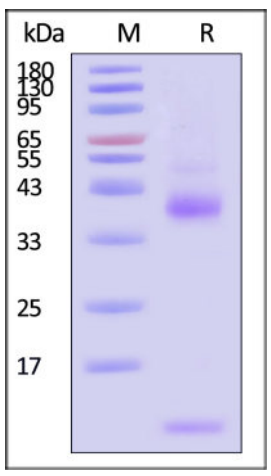
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

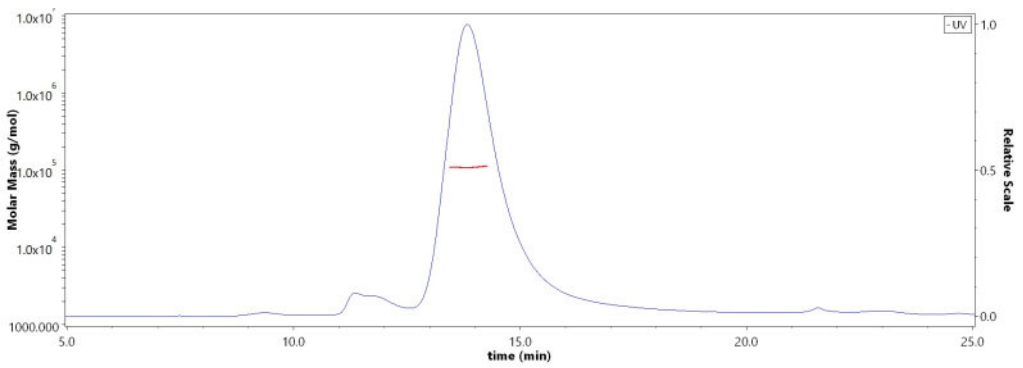
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



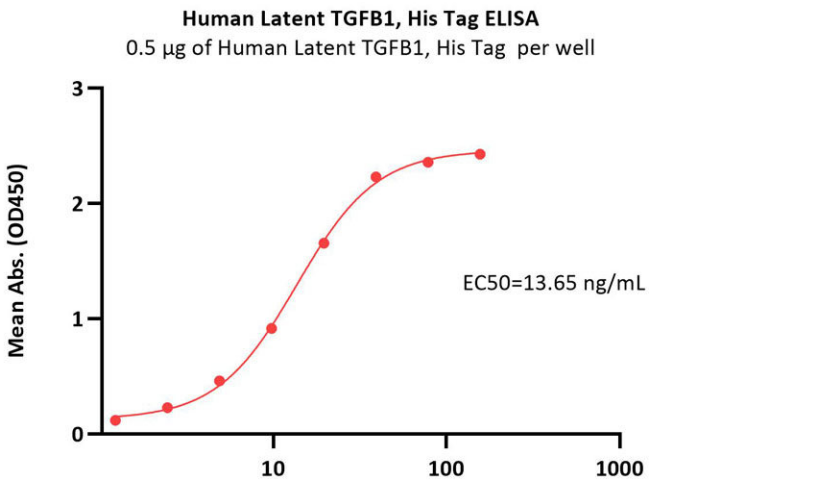
Human Latent TGFB1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

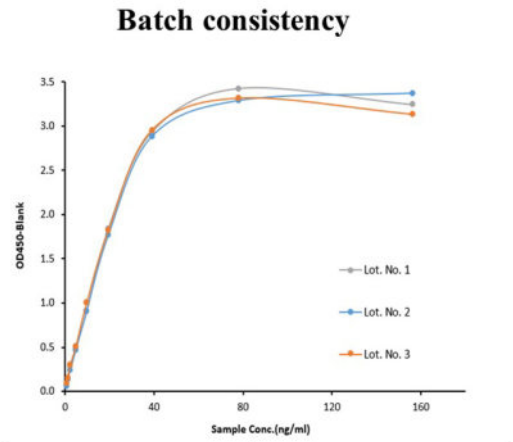
SEC-MALS



The purity of Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) is more than 85% and the molecular weight of this protein is around 100-110 kDa verified by SEC-MALS.
Report

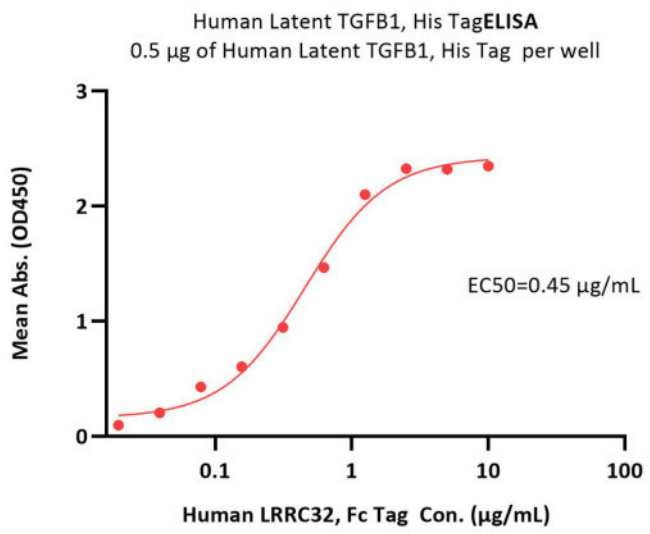
Bioactivity-ELISA





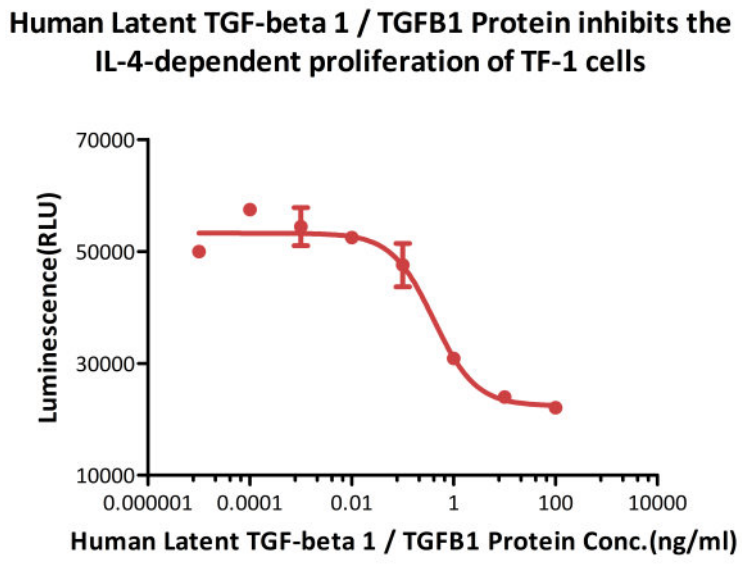
Lot. No.	EC50(μg/mL)
Lot. No. 1	0.0179
Lot. No. 2	0.0184
Lot. No. 3	0.0172

Immobilized Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) at 5 μg/mL (100 μL/well) can bind Biotinylated Human ITGAV&ITGB6 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT6-H82E4) with a linear range of 1-20 ng/mL (QC tested).



Immobilized Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) at 5 μg/mL (100 μL/well) can bind Human LRRC32, Fc Tag (Cat. No. LR2-H5256) with a linear range of 0.039-0.625 μg/mL (Routinely tested).

Bioactivity-Bioactivity CELL BASE



Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) inhibits the IL-4-dependent proliferation of TF-1 cells. The ED50 for this effect is 0.293-0.406 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.

Clinical and Translational Updates