



Synonym

CEDLAP,TGF-beta 1,TGFB1,DPD1,TGF-beta-1,TGFB

Source

Human TGFB1, premium grade(TG1-H4212) is expressed from human 293 cells (HEK293). It contains AA Ala 279 - Ser 390 (Accession # [P01137-1](#)).

Predicted N-terminus: Ala 279

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

**TGFB1(Ala 279 - Ser 390)
P01137-1**

This protein carries no "tag".

The protein has a calculated MW of 12.8 kDa (monomer). The protein migrates as 14 kDa (monomer) under reducing (R) condition, and 25 kDa (Dimer) when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE).

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Host Cell Protein

<0.5 ng/µg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/µg of protein tested by qPCR.

Sterility

The sterility testing was performed by membrane filtration method.

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 0.085% TFA in 30% ACN 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.

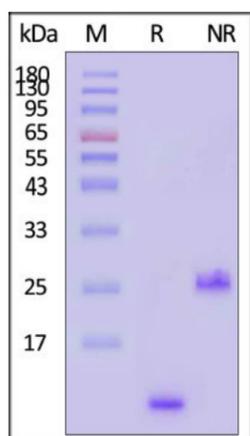
This product is stable after storage at:

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

SDS-PAGE

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and more!

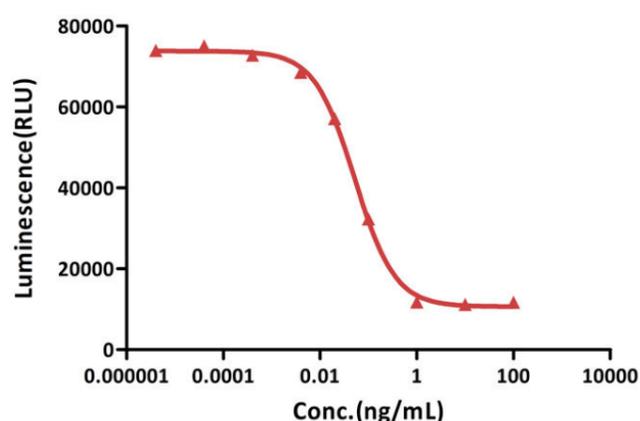




Human TGFB1, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

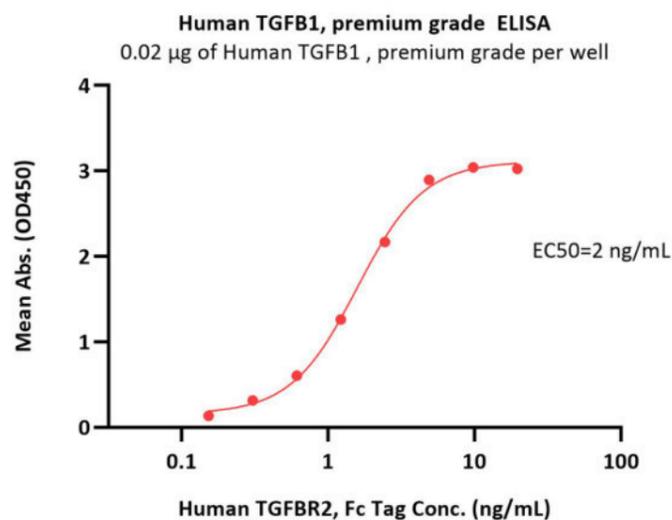
Bioactivity-Bioactivity CELL BASE

Human TGFB1, premium grade inhibits the IL-4 dependent proliferation the TF-1 cells



Human TGFB1, premium grade (Cat. No. TG1-H4212) inhibits the Human IL-4, premium grade (Cat. No. IL4-H4218) dependent proliferation the TF-1 cells. The specific activity of Human TGFβ1, premium grade is $> 8.00 \times 10^6$ IU/mg, which is calibrated against transforming growth factor β1 (NIBSC code: 89/514) (QC tested).

Bioactivity-ELISA



Immobilized Human TGFB1, premium grade (Cat. No. TG1-H4212) at 0.2 μg/mL (100 μL/well) can bind Human TGFBR2, Fc Tag (Cat. No. TG2-

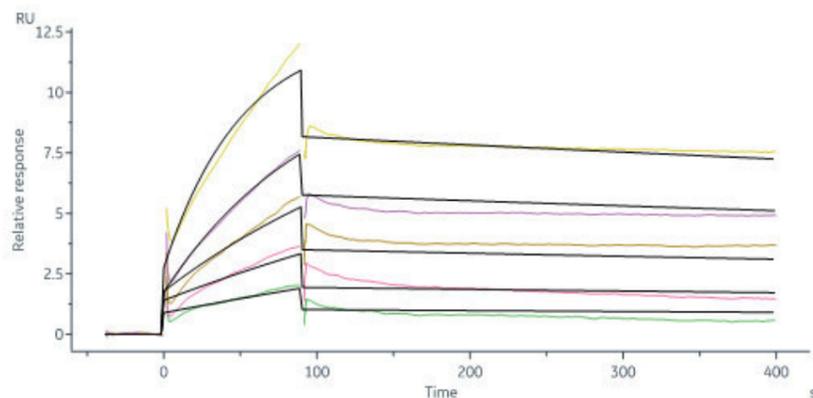
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H5252) with a linear range of 0.2-2.5 ng/mL (QC tested).

Bioactivity-SPR



Human TGFB1, premium grade (Cat. No. TG1-H4212) immobilized on CM5 Chip can bind Human TGF-beta RI Protein, Fc Tag (Cat. No. TG1-H5254) with an affinity constant of 99.2 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Transforming growth factor beta 1 (TGFB1) is also known as TGF- β 1, 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

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