Recombinant Human Mature TGF-beta 1 Protein

RPCB0931

Description

This high-purity recombinant protein is supplied as a kit for advanced applications. The kit includes Bradford Reagent to quantify total protein concentration for accurate sample normalization (Optional).

Protein Information

SKU: RPCB0931

Contents: 10 µg, 20 µg, 50 µg, 100 µg Bradford Reagent (1 vial, 2ml)

Reactivity: Human

Gene ID: 7040

Expression Host: HEK293 cells

Tags: No tag

Calculated MW: 12.79 kDa

Observed MW: 15 kDa

Protein Description: High quality, high purity and low endotoxin recombinant Recombinant Human Mature TGF-beta 1 Protein (RPCB0931), tested reactivity in HEK293 cells and has been validated in SDS-PAGE.100% guaranteed.

Protein Quantification (Optional): To quantify total protein levels, use the Bradford Reagent included in this kit. Visit https://www.assaygenie.com/bradford-protein-assay-protocol/ to view the full protocol.

Storage: Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.

Background: TGF-beta 1 is a member of the transforming growth factor beta (TGF-beta) family. The transforming growth factor-beta family of polypeptides are involved in the regulation of cellular processes, including cell division, differentiation, motility, adhesion and death. TGF-beta 1 positively and negatively regulates many other growth factors. It inhibits the secretion and activity of many other cytokines including interferon-γ, tumor necrosis factor-alpha and various interleukins. It can also decrease the expression levels of cytokine receptors. Meanwhile, TGF-beta 1 also increases the expression of certain cytokines in T cells and promotes their proliferation, particularly if the cells are immature.

TGF-beta 1 also inhibits proliferation and stimulates apoptosis of B cells, and plays a role in controlling the expression of antibody, transferrin and MHC class II proteins on immature and mature B cells. As for myeloid cells, TGF-beta 1can inhibit their proliferation and prevent their production of reactive oxygen and nitrogen intermediates. However, as with other cell types, TGF-beta 1 also has the opposite effect on cells of myeloid origin. TGF-beta 1 is a multifunctional protein that controls proliferation, differentiation and other functions in many cell types. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Once cells lose their sensitivity to TGF-beta1-mediated growth inhibition, autocrine TGF-beta signaling can promote tumorigenesis. Elevated levels of TGF-beta1 are often observed in advanced carcinomas, and have been correlated with increased tumor invasiveness and disease progression.

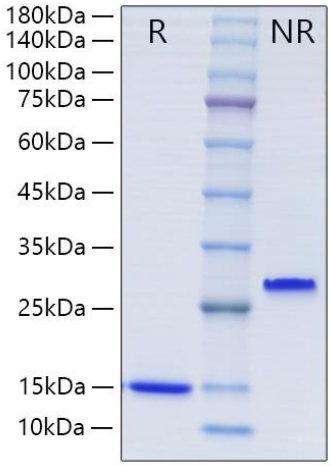
Synonyms: TGFB1, CED, DPD1, LAP, TGFB, TGFbeta, transforming growth factor beta-1, TGF-beta 1, CED, DPD1, LAP, TGFB, TGFbeta, TGF-β

Purification: ≥ 95 % as determined by SDS-PAGE.

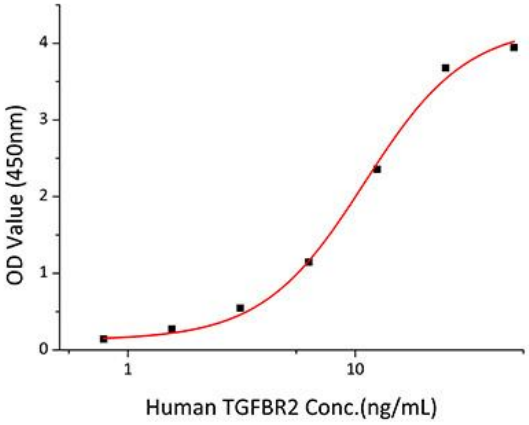
Endotoxin: < 0.01 EU/μg of the protein by LAL method.

Validation Data

Image	Description



Recombinant Human Mature TGF-beta 1 Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.



Immobilized Human TGF-beta 1 at 2 µg/mL (100 µL/well) can bind Human TGFBR2 with a linear range of 0.78-11 ng/mL.