

**Recombinant Human TGF- $\beta$ 1 (HEK 293 derived)**  
**Catalog # PBG10439****Specification**

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**Recombinant Human TGF- $\beta$ 1 (HEK 293 derived) - Product Information****Recombinant Human TGF- $\beta$ 1 (HEK 293 derived) - Additional Information****Description**

The three mammalian isoforms of TGF- $\beta$ , TGF- $\beta$ 1,  $\beta$ 2,  $\beta$ 3, signal through the same receptor and elicit similar biological responses. They are multifunctional cytokines that regulate cell proliferation, growth, differentiation and motility as well as synthesis and deposition of the extracellular matrix. They are involved in various physiological processes including embryogenesis, tissue remodeling and wound healing. They are secreted predominantly as latent complexes which are stored at the cell surface and in the extracellular matrix. The release of biologically active TGF- $\beta$  isoform from a latent complex involves proteolytic processing of the complex and /or induction of conformational changes by proteins such as thrombospondin-1. TGF- $\beta$ 1 is the most abundant isoform secreted by almost every cell type. It was originally identified for its ability to induce phenotypic transformation of fibroblasts and recently it has been implicated in the formation of skin tumors. Human TGF- $\beta$ 1 is a 25.0 kDa protein with each subunit containing 112 amino acid residues, linked by a single disulfide bond.

**Biological Activity**

The  $ED_{50}$  was determined by TGF- $\beta$ 1's ability to inhibit the M IL-4-dependent proliferation of M HT-2 cells is  $\leq 0.05$  ng/ml, corresponding to a specific activity of  $\geq 2 \times 10^7$  units/mg.

**Authenticity**

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**Endotoxin**

Endotoxin level is  $<0.1$  ng/  $\mu$ g of protein ( $<1$ EU/  $\mu$ g).

**Protein Content**

Verified by UV Spectroscopy and/or SDS-PAGE gel.

**Storage**

-20°C

**Precautions**

Recombinant Human TGF- $\beta$ 1 (HEK 293 derived) is for research use only and not for use in diagnostic or therapeutic procedures.

**Recombinant Human TGF- $\beta$ 1 (HEK 293 derived) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Recombinant Human TGF- $\beta$ 1 (HEK 293 derived) - Images**