

TGF-beta 1 (HEK 293 derived) Human HEK293 cells

Product Data Sheet

Type: Recombinant	Cat. No.:	
Source: HEK293 cells	RBG10310002	(2 µg)
Species: Human	RBG10310010	(10 µg)
Other names: Transforming Growth Factor- β 1, Differentiation inhibiting factor, Cartilage-inducing factor	RBG10310100	(100 µg)

Description

The three mammalian isoforms of TGF-beta, TGF-beta1, beta2, and beta3, 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-beta1 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. Recombinant Human TGF-beta1 derived from HEK293 cells is a 25.0 kDa protein with each subunit containing 112 amino acid residues, linked by a single disulfide bond.

Introduction to the Molecule

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Research topic

Apoptosis, Cardiovascular disease, Coronary artery disease, Immune Response, Infection and Inflammation, Oncology

Amino Acid Sequence

ALDTNYCFSS TEKNCCVRQL YIDFRKDLGW KWIHEPKGYH ANFCLGPCPY IWSLDTQYSK VLALYNQHNP GASAAPCCVP
QALEPLPIVY YVGRKPKVEQ LSNMIVRSCK CS

Source

HEK293 cells

Purity

98%

Biological Activity

The ED₅₀ was determined by TGF-beta1's ability to inhibit the mouse IL-4-dependent proliferation of mouse HT-2 cells is ? 0.05 ng/ml, corresponding to a specific activity of ? 2x10⁷ units/mg.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

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